

19 December 2025

Ben Byrd

Department of Environment, Tourism, Science and Innovation

Delegate of the Administering Authority

Environmental Protection Act 1994

Email: Ben.Byrd@des.qld.gov.au; CRMining@detsi.qld.gov.au

Reference: EPML00717813 (Blackwater Mine), A-PRCP-NEW-100758431

Dear Ben,

Subject: Response to Request for further information and Change Application

We refer to previous correspondence with the Department of Environment, Tourism, Science and Innovation (DETSI) regarding the current Blackwater Mine Progressive Rehabilitation and Closure Plan (PRCP) application. As discussed with DETSI, this correspondence serves two purposes:

1. Address the Information Request Notice (IRN) provided by DETSI on 13 June 2025. This notice relates to the PRCP submitted for Blackwater Mine (Environmental Authority (EA) number EPML00717813) on 11 November 2024; and
2. Submit a change application under s132(1) of the *Environmental Protection Act 1994* (EP Act).

Please see below for further detail regarding these two purposes.

1. Response to Request for Further Information

Whitehaven Blackwater Pty Ltd (Whitehaven) has reviewed the IRN and Whitehaven's responses to the *Attachment 1: Additional information requested for proposed PRC plan* items are enclosed. The surface water monitoring data spreadsheet provided by DETSI has also been populated and is provided as a separate attachment within the folder titled "*WHC IR Response - Supporting Attachments*". The groundwater monitoring data spreadsheet provided by DETSI has not been populated as this is currently being collated and submitted as part of an EA amendment.

This information (including the updated PRC Planning Part, PRCP Schedule and spatial files provided) constitutes Whitehaven's response to the IRN and, Whitehaven requests that DETSI proceeds with assessment of the application.

2. Change Application

Under s132(1) of the EP Act Whitehaven submits a change application to seek changes to the current Blackwater Mine PRCP application, (A-PRCP-NEW-100758431).

We would like to highlight, since the original 2024 PRC Plan and PRCP Schedule submission by Whitehaven (Rev 1) which was predominantly based off former owner's (BMA) mine plans, a number of changes have been made to the rehabilitation design approach and final landform design, which we believe enhances the ability to better manage risk, and therefore result in better land rehabilitation outcomes. These changes include:

- Reducing the number of ramp voids through backfilling during the mining operations, and backfilling sections of the residual voids at the end of mining;
- Reshaping of remaining ramp voids to a suitable slope to allow a PMLU; and
- Redefining the low-wall NUMA extent to be based on a geotechnical FOS of 1.5, which has allowed revegetation of a greater portion of residual void low-walls, which now form part of the designated PMLU areas

In addition, the following has also resulted through iterations to the mine plan:

- The proposed NUMA area has been significantly reduced from 3,967 ha (Rev 1) to 3,178 ha (Rev 2).
- Existing rehabilitation areas (RA6 and RA7) have increased from 1,929 ha (Rev 1) to 2,871 ha (Rev 2).

Further information on the changes described above are detailed in the IRN responses provided herein.

An updated PRC Planning Part, PRCP Schedule and spatial files are also provided with this response and change application.

Should you have any questions regarding this correspondence, please do not hesitate to contact me.

Yours sincerely



Brendan Dillon

Manager – Approvals

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Rehabilitation Planning Part

RFI 1

Item	Relevant Document Section	Issue or Comment	Information Requested
1	Section 3.4 of the Planning Part - Non-use management areas EA EPML00717813 Residual Void Investigation - Land Outcome Document Appendix 4.13 – Void Closure Plan	The EA EPML00717813 has been identified as the primary Land Outcome Document (LOD). The BMA Residual Void Investigation report has been identified as a secondary LOD. As neither of these LODs identify the location or area of the NUMAs, the requirements of section 754(4) apply. The PRC Planning Part does not include sufficient information that demonstrates the options available for minimising final void areas and volume has been considered for voids proposed to be Non-use management areas (NUMAs). This is particularly relevant for the most southern NUMAs within ML70157 and ML70139 as well as the Togara and Marshmead voids/NUMAs that have not yet been constructed, or are not yet at their final location, and have a much wider NUMA extent to that of the other NUMAs at Blackwater mine.	Provide an updated Planning Part that includes sufficient information to demonstrate the requirements of section 754(4) of the EP Act, particularly with regard to NUMAs stated in the Matters column. Provide details as to why these voids are much greater in extent than other NUMAs proposed for Blackwater and how these areas can be minimised.

NUMA minimisation has briefly been discussed in the cover letter above. In addition, Section 3.4.2 of the of the PRC Plan has been updated to describe this in further detail.

RFI 2

Item	Relevant Document Section	Issue or Comment	Information Requested
2	Appendix 4.13 – Void Closure Plan Section 3.5.1.1 of the Planning Part – Hydrogeology Section 3.5.1.7 of the Planning Part - Water management	The PRC Plan and supporting documents present inconsistent conclusions regarding sink vs. source dynamics of the site's residual voids. In some sections, it is stated that 'once the void lakes and groundwater levels have stabilised, the model results indicate the residual voids will continue to act as groundwater sinks'. While most residual voids are modelled to behave as groundwater sinks under post-closure equilibrium conditions, the Kennedy West void is predicted to represent a groundwater source, potentially in perpetuity, with an outflow rate of 107 m³/day at equilibrium. Section 3.5.3.3.2 of the Planning Part notes this outward water flux from Kennedy West is reportedly driven by, and would eventually be captured by, the adjacent Comet Downs void. There appears to be commitments in the PRCP to minimise the potential for environmental harm beyond the Mining Lease (ML) boundary. Further voids are discussed in the next request item that indicate other voids that may not act as sinks to groundwater. To address these inconsistencies and gaps, the PRCP must provide a clear and comprehensive summary of the modelling, conclusions, and supporting evidence to ensure alignment with closure objectives and regulatory requirements. As per section 3.3 of the PRCP guideline, a NUMA is defined in the EP Act as an area of land the subject of a PRC plan that cannot be rehabilitated to a stable condition after all relevant activities for the PRC plan carried out on the land have ended. It has not	Provide a clear and comprehensive summary of the modelling, conclusions, and supporting evidence to ensure alignment with closure objectives and regulatory requirements particularly with regards to whether the voids will act as groundwater sinks to ensure the minimisation of risks to the environment. Provide a comprehensive consideration the likely impacts and water quality of any void water proposed to be sources from the mining voids at any modelled stage. As per section 176A(3) of the EP Act, the administering authority must be satisfied that the schedule provides for all land the subject of the schedule to be rehabilitated to a stable condition, or managed as a NUMA in a way that achieves best practice management of the area and minimises risks to the environment. Provide sufficient information to demonstrate areas surrounding the NUMAS can achieve a stable condition.

		been demonstrated the areas surrounding the proposed NUMAs, in particular the groundwater, can achieve a stable condition as a result of the potential for the voids to act as sources or to allow for contaminant releases beyond the walls of the NUMA extent.	
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Since the issue of the information request, a major landform redesign has been undertaken. The PRC Plan has been updated to reflect this with modelling updated accordingly. Results from the updated groundwater model indicate different outcomes for the Kennedy West and Comet Downs East voids. The sink or source behaviour of the BWM residual voids is presented through lake-level time-series analysis and discussed throughout the revised SLR report (submitted as Appendix 4.2 of the PRC Plan). Modelling approaches, flow-path simulations, and scenario assessments are detailed in Sections 3.6.1.1.2 and 3.6.1.1.4 of the updated PRC Plan.

RFI 3

Item	Relevant Document Section	Issue or Comment	Information Requested
3	Section 3.4 of the Planning Part - Non-use Management Area Section 3.5.1.1 of the Planning Part - Hydrogeology	Releases of void pit water to surrounding hydrogeological formations are modelled to occur during certain periods post-closure, however, the spatial extent of these impacts has not been clearly defined. Figure 31 of the Planning Part, predicted movement of particles, suggests the potential for contaminant releases outwards, which are later reversed with all contaminated water returning to the voids. However, further information is required to clearly define the spatial zone and duration of potential groundwater impacts from void pit water releases to groundwater. Specific areas of concern are as follows: <u>Section 8.2.4 Residual Void Inflow – Deep Creek Void</u> Section 8.2.4 of the Hydrogeology Assessment states that for the Deep Creek Void: <i>The first 100 years post-closure is predicted to temporarily lose void water to surrounding natural geology before the flow gradient is reversed and the void reaches equilibrium as a net sink. The fate of this temporary post-closure outwards flux of void water is explored in Section 8.2.6.</i> Section 8.2.6 provides a particle tracking map, although the scale of that maps makes it difficult to track any movement of void water to groundwater in that first 100 years from Deep Creek void. Section 8.2.6 provides no discussion of the issue of the first 100 years post closure in Deep Creek void. Appendix 4.13 (Void Closure report) Section 4 provides some discussion supporting the concept of net groundwater inflow after 100 years. <u>Stewarton/Ballamoo residual void</u> Section 8.2.5.2 of the Hydrogeology Assessment states:	(a) Provide an updated Planning Part that clearly defines the spatial zone of potential groundwater impacts from void pit water releases to groundwater and the extent that void pit water will extent from the pit shell. (b) Provide additional information to clarify the predictions of void outflow to groundwater from Deep Creek void in the first 100 years post mining and the predicted extent and characteristics of the impacts of that outflow. (c) Confirm if particle tracking indicates that void water at the southern end of Stewarton/ Ballamoo residual void is predicted to move into groundwater and east off the Blackwater Coal Mine mining lease before potentially returning. Ensure that modelling and discussion of the modelling is consistent in the Planning Part. (d) Provide a detailed assessment of the likely impacts this predicted movement of void water from the Stewarton/Ballamoo residual void will have on groundwater in the area immediately east of the lease.

		<i>Lake levels are predicted to recover to within approximately 2 to 16 m below predicted Aries and Castor Seam groundwater elevations just outside the voids northern end at Stewarton_1 and southern at Stewarton_4 respectively. Lake levels are predicted to recover to approximately 2 m to 12 m below the predicted Pollux Seam groundwater elevation just outside the void at the northern end at Stewarton_1 and southern at Stewarton_4 respectively.</i> This indicates that the predicted void water levels at the northern end of the Stewarton/Ballamoo residual void are only 2 m above the predicted groundwater levels in the coal seams and 12 to 16 m above the predicted groundwater levels in the coal seams at the southern end. This description generally agrees with the predictive hydrographs presented in Appendix C. However, in Figure 8-36 (particle tracking figure), particles that start towards the lower or southern end of the void (not the northern end as you might expect from the information above) appear to move east out of the lease area and then return to the lease, although the map scale makes it difficult to determine.	
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Please see the responses provided in RFI#2 above.

Since issuance of the information request, a major landform redesign has been undertaken. To account for changes to the void design the hydrological, water balance, and hydrogeological models have been updated to reflect the current landform configuration. These updates are reflected in the updated Hydrogeology report (SLR, 2025) - see Appendix 4.2 of the PRC Plan.

As described in Section 8.2.4 of Appendix 4.2 (Residual Void Groundwater Inflow), a negative groundwater flux represents movement of water between voids, rather than groundwater flux away from the BWM site.

Updated particle tracking and modelling results presented in Sections 3.6.1.1.2 and 3.6.1.1.4 of the updated PRC Plan and Appendix 4.2, indicate that the revised landform design is predicted to prevent off-lease outflows from the voids. Accordingly, off-lease considerations for impact assessment are no longer applicable to this PRC Plan.

RFI 4

Item	Relevant Document Section	Issue or Comment	Information Requested
4	Section 3.5.1.1 of the Planning Part - Hydrogeology Section 3.1.2.6 of the Planning Part - Hydrogeology Section 3.5.3 of the Planning Part - Voids Appendix 4.2 Hydrogeology Assessment Bottom Dam Tailings Storage Facility and Sirius Creek: Preliminary Hydrogeological Review and Investigation	The following matters are noted from the 'Preliminary Hydrogeological Review and Investigation: Bottom Dam Tailings Storage Facility & Sirius Creek prepared by SLR 7 April 2025 (Hydrogeological Review) <u>MB21</u> MB21 is identified in Table 58 of the Planning Part as a Tertiary bore. In Table 4-1 of the hydrogeological assessment (Appendix 4.2), it is identified as being screened between 25 and 31 m. In the Hydrogeological Review, Table 2-1 identified that there was no log for MB21, and they were unable to identify a screened unit for this bore. Furthermore, the Hydrogeological Review stated that more recent co-located drilling indicates that the unit of Tertiary may be mis-attributed to this aquifer. In the same report, monitoring bore BWM_MB135_02 is identified as being located adjacent to MB21. BWM_MB135_02 is screened between 17 and 23 m in coal and siltstone in what appears to be the Rangal Coal Measures based on the drilling log. It appears clear that MB21 is not monitoring the Tertiary. Additionally given the lack of knowledge of the construction details for MB21, it is recommended that it be replaced by BWM_MB135_02.	To allow continuity of data, MB21 is to be retained in Table 58 of the Planning Part, with an amended hydrogeological unit (e.g. Rangal Coal Measures). BWM_MB135_02 is to be included in Table 58.

The dataset used for calibrating the model used BWM_MB21_02 as Rangal Coal Measures (Aries Seam) and included BWM_MB135_02, representing the Rangal Coal Measures (Orion Seam).

RFI 5

Item	Relevant Document Section	Issue or Comment	Information Requested
5	Table 58 of the Planning Part Appendix 4.2 Hydrogeology Assessment; Section 4.1, Table 4-1 Groundwater Monitoring Network	Table 58 of the Planning Part and Table 4-1 of the Hydrogeology Assessment does not identify any monitoring bore that is within spoil or proposed as part of a future monitoring network. Table 8-10 in the hydrogeological assessment indicates that in seven of the eleven residual voids predicted groundwater inflow is between 40 and 60% of total predicted inflows to the voids. Additionally, Section 8.2.4 indicates that the spoil contributes between 26 and 100% of all predicted groundwater inflow to the voids. Predicted groundwater inflow from the spoil is a significant part of the total groundwater inflow and subsequently an important part of the water balance, determining the relationship between the void water levels and adjacent groundwater levels at equilibrium. It is therefore considered important that monitoring bores be established at a future date in the spoil to provide calibration targets in the spoil to enable confidence in the parameters used to represent groundwater recharge, storage and movement in the spoil. This will provide additional confidence in relation to future modelled residual void conditions.	Provide advice as to where and when monitoring bores will be established in the spoil including GPS locations.

Locations and types of monitoring bores have been provided in Appendix 4.2 of the PRC Plan (SLR, 2025). Section 4.1 of Appendix 4.2 provides the locations and bore details of EA and non-EA monitoring bores including groundwater monitoring bores targeting spoil.

RFI 6

Item	Relevant Document Section	Issue or Comment	Information Requested
6	Table 58 of the Planning Part Appendix 4.2 Hydrogeology Assessment; Section 4.1, Table 4-1 Groundwater Monitoring Network	Issues with some of the monitoring bores identified in Table 58 of the Planning Part are as follows: BWM_MB15_01 This bore is identified in Table 58 as a Tertiary bore. It is not included in Table 4-1 of Appendix 4.2 Hydrogeology Assessment. The drilling log for this bore identified as 'Hydro Drilling scope of work', indicates that the bore is screened adjacent a coal seam. This conflicts with the description in Table 58. BWM_MB01_01 The hydrogeology assessment report advises that the only alluvial bore on site that has provided water samples is BWM_MB01_01. This bore should be included in Table 58.	Address the identified issues of some of the bores of Table 58 and provide evidence to support any assumptions and variations made.

The BWM_MB15_01 screened interval is 10.43 – 16.43 metres below ground level across "sandstone". It is assessed to be monitoring the Tertiary, with no indication of coal seams in the bore log and included in Appendix 4.2 Table 4.1. BWM_MB01_01 is screening the Quaternary sediments and is included in Appendix 4.2 Table 4-2.

RFI 7

Item	Relevant Document Section	Issue or Comment	Information Requested
7	Appendix 4.2 Hydrogeology Assessment Section 4.1, Table 4-1 Groundwater Monitoring Network	Table 4-1 provides details of the monitoring bores used in the assessment. The Rangal Coal Measures bores appear to have their monitored unit identified as either RCM coal or RCM O/I (presumably overburden or interburden). The numerical groundwater model as described in Table 8-1 assigns seven layers to represent the various coal seams, overburden and interburden within the Rangal Coal Measures. Those Rangal Coal Measures monitoring bores used in the model calibration would have been assigned to a model layer based on an understanding of which unit within the Rangal Coal Measures they were monitoring. These units, where known, should be identified in Table 4-1 to provide confidence in the data being used to calibrate the numerical groundwater model. In addition, it is noted that Table 4-1 appears to not provide details of a number of bores which are in the PRCP Table 58 Groundwater monitoring bore locations. The following bores are in Table 58 but not in the hydrogeological assessment Table 4-1: BWM_MB02_01 BWM_MB02_02 BWM_MB03_02 BWM_MB12_01 BWM_MB12_02 BWM_MB15_01 BWM_MB17_01 BWM_MB17_02 Explanation of the reason why these bores were not considered part of the monitoring network in the Hydrogeological Assessment is	(a) Provide an updated Table 4-1 which identifies the geologic unit/s that each of the Rangal Coal Measures is monitoring. (b) Provide explanation of the reason why the following bores identified above as being in the PRCP Table 58 are not in the Table 4-1 in the hydrogeological assessment. BWM_MB02_01 BWM_MB02_02 BWM_MB03_02 BWM_MB12_01 BWM_MB12_02 BWM_MB15_01 BWM_MB17_01 BWM_MB17_02 (c) Rerun and provide the updated numerical groundwater model where the above listed bores will provide an enhanced model result or where the outcome of matters noted in this information request notice would benefit from a rerun of the model.

		required. Where these bores would enhance the capability and outputs of the model (e.g. bores that are not dry, or bores that may provide benefit at the end of model calibration), the model must be rerun with consideration of these bores and their data available. It is noted that the model was not recalibrated for the PRCP rather, is the 2023 model.	
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These bores are now included as part of the groundwater model calibration dataset except for MB12_01 and MB17_01 which have been dry since installation. The bores are presented in PRC Plan Appendix 4.2 (Table 4.1).

RFI 8

Item	Relevant Document Section	Issue or Comment	Information Requested
8	Hydrogeology Assessment Section 4.3.5.4, Figure 4-15, Groundwater level contours Aries seam (observed data)	Contours are provided based on observed water level data in bores considered to be monitoring the Aries coal seam and void water levels. This provides useful information for the Aries seam based on actual data. However, the bores used to provide the groundwater levels for these contours are not identified. These bore numbers should be provided on the map adjacent the elevation of groundwater level at each site to demonstrate which bores are used to provide this interpretation.	Provide an updated Figure 4-15 to the Hydrogeology Assessment identifying which bores were used to provide groundwater elevation data for the Aries seam.

Contours and mapping have been updated to reflect the bores utilised (see Appendix 4.2 Figure 4-21).

RFI 9

Item	Relevant Document Section	Issue or Comment	Information Requested
9	Hydrogeology Assessment Section 8.1.3, Table 8-2 Model Calibration Targets	The Column headings in Table 8-2 'Model Calibration Targets' don't appear to represent the data in this table. There are a greater number of calibration target locations then there are target head measurements. It is possible the columns have been reversed with an accurate number of target heads are not currently represented in this table.	Review and update the column headings in Table 8-2 'Model Calibration Targets' including the data in the fourth and fifth columns.

The modelling technical report (SLR, 2025) has been updated. See calibration reporting in Appendix 4.2 (Tables 3-1 and 3-2).

RFI 10

Item	Relevant Document Section	Issue or Comment	Information Requested
10	Hydrogeology Assessment Section 8.1.3 Model Calibration	Model simulated groundwater elevation contours should be presented for the end of the transient calibration period for the major geologic units. In particular, they should be provided for the Aries seam to compare with the interpreted contours provided in Figure 4-15, based on observed data. This comparison must be made available to provide confidence that the groundwater flow direction being simulated by the numerical groundwater model is similar to that interpreted from observed groundwater data.	Provide simulated groundwater elevation contours for the major geologic units at the end of the transient calibration period.

Simulated groundwater elevation contours for the major geological units at the end of the transient calibration period are provided in PRC Plan Appendix 4.2 (see Appendix C).

RFI 11

Item	Relevant Document Section	Issue or Comment	Information Requested
11	Hydrogeology Assessment Table 8-3 Groundwater Model and Data Limitations	Under a heading of 'measurement error' in Table 8-3 'Groundwater Model and Data Limitations' states: Bore logs and construction details available for many site bores, and long-term site water level data available for various units. Improvement in availability of specific details for some bores may improve confidence in observation data. Table 4-1 of the Hydrogeology Assessment must clearly identify which bores have bore logs and construction details available. Additionally, it should be identified which calibration bores had this data available to provide confidence in the numerical groundwater model.	(a) Update Table 4-1 of the Hydrogeology Assessment to identify those bores where bore logs and construction details are available. (b) Provide details of which bores used in the model calibration were supported by bore logs and construction details.

A comprehensive bore audit and review has been undertaken, including assessment of available bore logs and construction details, and confirmation of screened intervals for each monitoring bore. The calibration dataset has been updated accordingly.

PRC Plan Appendix 4.2 (Section 4.2.1) outlines the monitoring bores assigned to each geological unit and Table 4-1 has been updated to reflect each geological unit and the screened sections for each of the bores.

RFI 12

Item	Relevant Document Section	Issue or Comment	Information Requested
12	Hydrogeology Assessment Section 8.2.1 'Model set Up, Spoil parameters'	Section 8.2.1 'Model set Up, Spoil parameters' identifies the hydraulic properties used for the in-pit tailings in the recovery model but does not identify what hydraulic properties were used to represent the spoil. Additionally, it is noted that this section states: recharge and evapotranspiration [ET]) in the recovery model were set constant for the duration of the recovery model, at their values consistent with the previous predictive mining model (SLR, 2023b). A review of SLR, 2023b 'Blackwater Mine – North Extension Project Groundwater Modelling Technical Report' indicates that a recharge rate of 7.4% of the average annual rainfall was applied to the spoil. There appears to be no supporting information for the use of that rate of recharge. This rate appears to be above some literature values available (Mackie, 2009).	(a) Provide advice as to what hydraulic conductivity and specific yield were used to represent the spoil in the recovery model. (b) Provide information to support the use of a recharge rate of 7.4% applied to the spoil in the recovery model.

The Spoil recharge has now been calibrated to 2.9% of recharge which is within the range of value as reported in Mackie (2009). Spoil hydraulic properties are presented in the calibration report (PRC Plan Appendix 4.2).

RFI 13

Item	Relevant Document Section	Issue or Comment	Information Requested
13	Hydrogeology Assessment Section 8.2.1 'Model set Up, Spoil parameters'	Section 8.21 'Model Setup, in pit tailings' states: The PRC Plan's proposed final landform 2.4 was replicated in the recovery model, including areas of spoil emplacement within mined out pits, the 11 proposed residual voids, and the two in-pit tailings emplacements at Bonnie Doon and Laleham. The distribution of modelled spoil emplacement is shown on Figure 8-1. It is noted that there are other tailings emplacements adjacent residual voids. These include Deep Creek and Kenmare residual voids.	(a) Provide supporting information on how other tailings emplacements including those adjacent the Deep Creek and Kenmare residual voids have been represented in the numerical groundwater model. (b) Where these emplacements have not been represented in the model, what impact is this likely to have on predicted modelling adjacent the residual voids. OR provide an updated model that addresses these emplacements.

Tailings and spoil emplacements associated with the updated final landform have been incorporated into the numerical groundwater model. This includes emplacements at Bonnie Doon, NCPP, R72, Bottom Dam, Laleham, and Ramp 74, including those adjacent to the Deep Creek and Kenmare residual voids. These features are represented in the model geometry and parameterisation consistent with the revised landform design.

RFI 14

Item	Relevant Document Section	Issue or Comment	Information Requested
14	Figure 65 of the Planning Part	This figure must clearly identify which units are being monitored. This could be achieved by colour coded the bores to identify the monitored geologic units.	Provide an updated figure 65 that clearly identifies the units being monitored e.g. colour coding.

Figure 4-1 of PRC Plan Appendix 4.2 has been updated to address the information request. In addition, Table 3-67 of the revised PRC Plan describes the aquifers being monitored.

RFI 15

Item	Relevant Document Section	Issue or Comment	Information Requested
15	Appendix 4.3 – Material Characterisation 3.1.2.7 Soil types, properties and productivity 3.5.1.4 Soil and capping material.	The current volume of soil suitable for rehabilitation has been provided on the basis of a total available soil. Further expansion of Section 3.5.1.4.2 of Planning Part is required to demonstrate there are adequate volumes of each specific soil type (based on Table 25 of the Planning Part) available for the specific use (i.e. clay topsoils on plateau and gravelly clay topsoils on batters) is required. This additional information must state: • the volumes of each stockpiled soil class that can be used as primary or secondary growth media. • the volumes of materials to be used on the plateau (low slope) and external embankments (higher slopes) as per Landloch’s recommendations of Appendix 4.3. • a comparison between volumes of soil suitable for intended use against the actual volume of soil required per rehabilitation area. Landloch emphasises that more soil-specific screening is required for any material used in rehabilitation activities (e.g. growth media and cover system). This requirement needs to be integrated into the PRCP schedule.	Provide an updated Planning Part which includes further information of the soil suitability for rehabilitation including: (a) the volumes of each stockpiled soil class that can be used as primary or secondary growth media. (b) the volumes of materials to be used on the plateau (low slope) and external embankments (higher slopes) as per Landloch’s recommendations. (c) a comparison between volumes of soil suitable for intended use against the actual volume of soil required per rehabilitation area.

The following information is provided to address the information request:

Response to item (a): Section 3.6.1.4.2 of the updated PRC Plan has been revised to describe the volumes of stockpiled soil available for use as primary growth media. Updated volume calculations indicate a surplus of approximately 663,000 m³ of primary growth media relative to the total volume required to complete all future rehabilitation areas.

Section 3.6.1.5.3 describes the availability of suitable secondary materials (spoils), which are present in abundant quantities and are suitable for blending with soils to form additional primary growth media. These blended materials are proposed to support rehabilitation of steeper woodland habitat PMLU slopes at BWM.

Response to item (b):

Whitehaven consulted with Landloch, the authors of Appendix 4.3 to PRC Plan Rev 1, in relation to this information request. Neither Landloch nor Whitehaven have been able to identify any references within the submitted PRC Plan or its appendices to rehabilitation material recommendations specifically defined in terms of “plateaus” (low slopes) or “external embankments” (higher slopes).

The PRC Plan and PRCP Schedule specify minimum growth media thicknesses of ≥ 100 mm for woodland PMLUs and ≥ 150 mm for cattle grazing and watercourse PMLUs. It is proposed these requirements apply across all rehabilitated BWM landforms and provide consistent material placement criteria for both low-slope and higher-slope areas.

Response to item (c):

Appendix 4.3 presents soil assessment data indicating that all topsoil analysed at the time of sampling was suitable for rehabilitation use. In addition, the PRCP Schedule includes requirements for growth media health and suitability to be assessed and documented by an appropriately qualified person (AQP) prior to placement on rehabilitated areas (RM4.1). Where an assessment undertaken in accordance with RM4.1 identifies that growth media does not meet the criteria specified in Attachment 1 of the PRCP Schedule, amelioration is required prior to placement to ensure suitability for the intended PMLU (RM4.2).

RFI 16

Item	Relevant Document Section	Issue or Comment	Information Requested
16	Section 3.5.1.6 Cover design Section 3.5.2.3.5 QA/QC of cover construction Appendix 4.3 Material Characterisation Appendix 4.12 - Concept Cover Designs for Waste Storage Facilities at Blackwater Mine (Henderson Geotech Pty Ltd 2024) Section 3.6.1 of the PRCP Guideline.	The proposed cover design does not meet the requirements of the PRCP Guideline. Section 3.5.1.6 Cover design of the Planning Part, notes that: 'As detailed in Section 3.5.1.3, the main types of waste materials at BWM include spoil, rejects and tailings. Tailings and rejects are disposed of in dedicated TSFs and/or rejects landforms and are addressed in Section 3.5.2. Considering the waste materials within the spoil landforms, the large quantities of inert spoil and the methods of disposal, the geochemical assessment concluded that no specific AMD management measures are required for the spoil dumps'. Appendix 4.12 of the Planning Part contains some of the information requirements of 'cover design', Section 3.6.1 of the PRCP Guideline. Section 3.5.2.3.5 states" The concept cover designs detailed in this PRC Plan will be refined to detailed designs by the end of mining, for application of the required covers." Appendix 4.12 notes, 'The conceptual cover designs described in this report do not have the level of analysis required for detailed design and are applicable only to the scenarios and inputs also described'. Appendix 4.12 provides the following various conceptual designs: • NCPP TSF - the preferred cover for this TSF is the multi-layer system (Section 5.3.2)	As per the PRCP Guideline, the cover system design must be appropriate for the type(s) of waste the project will generate and reflect a risk-based approach. Where waste has the potential for AMD, neutral mine drainage or saline mine drainage, an appropriate cover system must be designed taking into consideration: • availability of suitable cover materials (both quality and quantity) • criteria for discharge (i.e. to protect environmental values) • suitable vegetation. The cover design should include, to an appropriate level of detail for the risk,: • identification and specification of the objectives of the cover system • a detailed description of the design including the thickness (m) of each layer • a detailed description of construction methodology including any proposed staging of the cover system • a quantitative assessment that identifies the location and quantity of proposed capping material available on site • proposed QA/QC for the construction of the cover system including the timely implementation of corrective actions where deviations from the design are identified.

		• Laleham TSF (Section 6.3.2) - the preferred cover type is a thick layer of general spoil, including the material that is already in place. Final surface gradients, topsoil thickness and vegetation will be consistent with other spoil landforms rehabilitated to the same post-mining land use • R72 WSF (Section 7.3.2) - a thick cover of general spoil material • R74 WSF (Section 8.3.2) - combined spoil and water covers • Bottom Dam TSF and ROM3 Area WSF (Section 9.3.2) - the preferred cover type is a thick layer of general spoil • Bonnie Doon TSF (Section 10.3.1) - estimates are not included in the conceptual cover design; instead, settlement will be assessed and allowed for as part of detailed design and especially by adaptive design revision during the construction phase. • Ramp 36 Rejects dump (11.3.2) - a thick layer of general spoil is proposed for rehabilitation, with spoil sourced from future mining of the Deep Creek Pits. Insufficient information has been provided to demonstrate these areas will achieve a stable condition. The alternative cover systems proposed are not supported by any field data. Proposed cover designs must provide supporting evidence as to which cover is most appropriate to meet the environmental risk posed by the final landforms. More detailed design information on both the landform design and PAF placement and agreed risk is required to support the use of a low-risk cover design.	
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The PRCP Guideline requires that cover system design be appropriate to the nature of the waste, the level of risk, and the stage of the project. The PRC Plan has been prepared on this basis and adopts a staged, risk-based approach to cover system design consistent with accepted industry practice and other approved PRC Plans.

Conceptual cover system designs for spoil landforms, tailings storage facilities (TSFs), and reject dumps are described in Section 3.6.1.6.4 of the PRC Plan and have been developed to address the cover system objectives

described in Section 3.6.1.6.3 and Table 3-33. These objectives consider the potential for acid and metalliferous drainage (AMD), neutral mine drainage, and saline mine drainage, as well as erosion control, long-term stability, and achievement of the nominated PMLUs.

The selection of a cover system for each TSF and reject dump is dependent on the specific material characteristics, hazard profile, availability of suitable cover materials, and the intended PMLU. As such, the PRC Plan appropriately presents conceptual cover designs rather than detailed construction-level specifications at this stage.

PRC Plan Appendix 4.9 (Conceptual Cover Designs for Waste Storages at BWM), together with Table 3-33, summarises the conceptual cover system configurations proposed for TSFs and reject dumps, including layer functions and indicative thicknesses. Appendix 4.9 provides additional narrative describing the intent, performance objectives, and assumptions underpinning these conceptual designs.

These facilities are expected to be operational for several decades prior to closure. Detailed cover system design elements such as final layer thicknesses, construction methodologies, staging, quantitative material allocation, and QA/QC procedures will necessarily depend on site conditions, waste characteristics, regulatory standards, and best practice guidance applicable at the time of closure. Requiring this level of detail currently would be premature and not proportionate to the current level of risk or design maturity.

This approach is consistent with industry practice and with other approved PRC Plans sighted online, which similarly adopt conceptual designs supported by future design commitments.

Proposed PRCP Schedule General Condition PRCP14 (below) includes criteria requiring site-specific cover system designs to be developed and assessed at the appropriate time in the future.

PRCP14 No less than three (3) months prior to the earliest commencement of RM3 for each relevant structure:

- (a) the holder must provide an AQP-prepared landform closure design report demonstrating that the relevant structure and final landform will achieve the performance outcomes described in the PRC Plan, including geotechnical stability, erosion resistance, and water quality outcomes consistent with the nominated PMLU and/or NUMA; and
- (b) the design report must include a durability assessment and evidence that the design has been developed in accordance with accepted industry standards and guidance.

Proposed condition PRCP14 ensures that, prior to construction of final covers, detailed designs will address:

- material availability (quality and quantity),
- cover system objectives and performance criteria,
- detailed layer thicknesses and construction methodology,
- quantitative material allocation,
- QA/QC procedures and corrective actions.

RFI 17

Item	Relevant Document Section	Issue or Comment	Information Requested
17	Section 3.5.1.2 of the Planning Part - Flooding Section 3.4 of the Planning Part - Non-use Management Areas	The PRCP concludes that the Togara / North Marshmead residual void is only “marginally” impacted by a 0.1% AEP event and does not propose mitigation measures on the basis that the intersecting reach of Sirius Creek has a stream order of less than 4. However, stream order alone is not a valid exemption from rehabilitation or flood impact assessment obligations under PRCP Guideline. Where a residual void intersects the 0.1% AEP floodplain, the PRCP must demonstrate landform performance, structural integrity, and environmental risk management under extreme flood events. In accordance with Section 3.6.3 of the PRCP Guideline, if floodwaters are likely to move over backfilled material, an assessment of the hydraulic properties must be conducted to assess whether instability may occur. If instability is possible, modification to the landform design of the backfilled void may be required. If floodwaters are allowed to enter the void this may compromise the stability of the wall, which can increase the volume of floodwater entering the void. Where relevant, consideration must be given to the impacts of floodwater interaction on erosion.	Provide further detail in the Planning Part of the landform performance, structural integrity, and environmental risk management under extreme flood events (including up to Probable Maximum Flood) for the Togara / North Marshmead residual void that achieves the requirements of Section 3.6.3 of the PRCP Guideline. Detail must be provided as to the possible re-design options of the final landform and the use of other structures to provide structural instability, flood egress and erosion susceptibility to ensure achievement of the objections of section 176A(3) of the EP Act described earlier.

PRC Plan Section 3.5 and 3.6.1.2, along with Section 5.2.1 of the VCP demonstrate the revised final landform is immune from flood events up to and including the 0.1% AEP event. Modelling indicated flood protection landforms and rehabilitated dumps are located in areas where flood velocities are lower than 2 m/s for all events up to the 0.1% AEP. As such, the final landform is expected to remain stable for all events up to the 0.1% AEP design flood event. For events rarer than 0.1% AEP, such as the PMF, severe erosion and scour are likely to occur throughout the catchment during a PMF event either with or without the alterations to the landscape resulting from mining operations.

RFI 18

Item	Relevant Document Section	Issue or Comment	Information Requested
18	Section 3.5.1.2 of the Planning Part - Flooding Section 3.4 of the Planning Part - Non-use Management Areas Appendix 4.6 – Rehabilitation Flood Assessments	Modelling presented in Figure “Appendix C6-2-4” of Appendix 4.6 – Rehabilitation Flood Assessments confirms that the Laleham Void is inundated under PMF. Given the magnitude of flow and its location adjacent to the Sirius Creek Diversion, the interaction may result in instability or failure of the diversion and lead to connectivity between the void and the downstream environment. Figure “Appendix C6-3-4” shows velocities in Sirius Creek and portions of the Laleham Void exceeding 3.5 m/s (though the exact upper bound is not reported) which indicates high erosive and hydraulic force. This raises significant concern regarding the structural integrity of both the diversion and the void wall during extreme flood events and consequence on surrounding and downstream.	Revise final landform designs to mitigate risk from flood inundation from 0.1% AEP or PMF events (depending on consequence of inundation). Propose protective measures to mitigate stability risks from high velocity flows and shear stresses. Provide modelling to demonstrate that voids, diversions and creek boundaries will be erosionally and structurally stable and not adversely impacted during rare and extreme events.

Please refer to the response provided in RFI 17.

PRC Plan Section 3.6.1.2.3 and Section 5.2.4 of the VCP discuss the flood risk profile that was prepared to assess the risk associated with flood ingress during a PMF event over the revised final landform. The risk to the nine residual voids that see ingress during a PMF event was deemed to be low.

RFI 19

Item	Relevant Document Section	Issue or Comment	Information Requested
19	Section 3.5.1.2 of the Planning Part - Flooding Appendix 4.6 Rehabilitation Flood Assessments Section 3.4 of the Planning Part - Non-use Management Areas	Flood modelling indicates that partial backfilling of the Laleham Void removes it from the 0.1% AEP flood extent of Sirius Creek. While this suggests the backfilled landform avoids direct inundation, other hydraulic parameters raise serious concerns. Figure 6 of the Flood Assessment Report shows shear stresses exceeding 80 N/m² under the 2% AEP event in the Sirius Creek Diversion adjacent to the Laleham Void. It is reasonable to expect significantly higher stresses under rarer and extreme events such as the 0.1% AEP and PMF. This, combined with velocities exceeding 3.5 m/s (Appendix C6-8-3), suggests the Sirius Creek Diversion is prone to erosional and structural instability which can influence Laleham Void. Unless the Sirius Creek diversion is demonstrated to be stable under 0.1% AEP (and PMF events if consequence on surrounding and downstream is high), the Laleham Void must be assessed as potentially unstable and at risk of being influenced by diversion failure. This is inconsistent with the requirement under the PRCP Guideline to demonstrate landform stability under flood scenarios within in a risk-based framework. Voids located adjacent to the Emu Creek, Deep Creek, and Rockland Creek diversions exhibit the same potential risk profile as the Laleham Void. While direct inundation may not occur under the 0.1% AEP event, their proximity to diversions subject to high velocity and shear stress raises concerns about erosion-induced instability or diversion failure. Appendix 4.6 – Rehabilitation Flood Assessments, modelling confirms that	See above.

		eight residual voids: Mimosa, Besgrove, Deep Creek, Stewarton, Ballamoo, South Marshmead, Kennedy West, and Comet Downs East are subject to inundation under PMF flood	
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Please refer to the response provided in RFI 17.

A conceptual design of a permanent Sirius Creek Diversion is currently being developed (PRC Plan Section 3.6.1.7.5). The Sirius Creek diversion will be designed to be stable under bank full conditions during events up to 2% AEP according to the Guideline: Works that interfere with water in a watercourse activity (Watercourse Diversion Guideline).

RFI 20

Item	Relevant Document Section	Issue or Comment	Information Requested
20	Section 3.5.1.7.5 of the Planning Part - Surface water diversions Appendix 4.9 - PRCP Concept Design Report - Sirius Creek Appendix 4.10 PRCP Concept Design Report - Taurus Creek Appendix 4.11 - PRCP Concept Design Report - Rockland Creek	Section 3.5.1.7.5 of the Planning Part proposes that Creek diversions are to be re-aligned where required and rehabilitated to form a stable landform that allows relinquishment of the water licences. Three diversions (Sirius, Taurus and Rocklands) require realignment and/or rehabilitation. • PRCP Concept Design Report - Sirius Creek (Engeny, 2024a) (Appendix 4.9) • PRCP Concept Design Report - Taurus Creek (Engeny, 2024b) (Appendix 4.10) • PRCP Concept Design Report - Rockland Creek (Engeny, 2024c) (Appendix 4.11) Sirius Creek is a stream order ≥ 4 watercourse (Appendix 4.9), Taurus Creek and Rockland Creek are identified as stream order 4 watercourses (Appendix 4.10 and 4.11 respectively). These diversions qualify as permanent diversions under the Guideline: Works that interfere with water in a watercourse for a resource activity (OSW/2019/4599) (Watercourse Diversions Guideline) and sections 19–20 of the Water Act 2000. The concept design is required to demonstrate functional feasibility, per Section 2.1 and Table 6 of the Watercourse Diversions Guideline. This includes identifying key design risks and assumptions to show that each diversion outcome is achievable. However, the current concept design (Appendix 4.9) does not meet these expectations: • Outcome 2: No hydrologic assessment to confirm flow regime continuity e.g. peak flows, baseflow, duration. • Outcome 3: No hydraulic parameters e.g. velocity, shear stress are provided for design events such as 0.1% AEP with climate change adjustment. • Outcome 4: No sediment transport or	Refer to the requirements of the Guideline: Works that interfere with water in a watercourse for a resource activity— watercourse diversions authorised under the Water Act 2000 (OSW/2019/4599). To meet concept-stage expectations, the PRCP must be revised to include: • hydraulic modelling (including 0.1% AEP + climate change and PMF), • sediment transport and continuity assessment, • Justification for armouring design and erosion control based on site conditions, • A staged rehabilitation and monitoring plan aligned with Table 8 of the Guideline.

		continuity modelling is presented to support long-term geomorphic function. • Outcome 5: Rock protection is not justified against design thresholds. There is no assessment of geomorphic or substrate stability. • No indication is given that the channel will become self-sustaining. A monitoring or rehabilitation plan is absent, contrary to Section 2.3 and Table 7. In its current form, the design does not demonstrate sufficient feasibility to meet the permanent diversion criteria for high-order streams under the Watercourse Diversions Guideline or the Water Act 2000. Refer to the PRCP schedule section below for further concerns proposed to be addressed through milestone criteria for creek diversions.	
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PRC Plan Appendices 4.6: *Rehabilitation Flood Assessments (Appendix E)*, 4.10: *Sirius Creek Diversion Concept Design*, 4.11: *Taurus Creek Diversion Concept Design*, 4.12: *Rockland Creek Diversion Concept Design* and 4.13: *Deep Creek Diversion Concept Design* provide details for the proposed permanent diversions.

Appendix E of PRC Plan *Appendix 4.6: Rehabilitation Flood Assessments* documents the development of a calibrated hydrological (URBS) and hydraulic (TUFLOW) model, which has been calibrated to historical flows to show the model matches the flow regime of the local watercourses.

The model has assessed the 0.1% AEP flood event with climate change and the PMF for each watercourse against the final landform.

In consultation with the regulator, WHC is developing conceptual designs of existing temporary watercourse diversions, to develop a final alignment configuration that complies with contemporary standards for a permanent watercourse diversion (DNRME and ACARP). PRC Plan Appendices 4.10 to 4.13 document the conceptual design of the diversions in accordance with the watercourse diversion guidelines, including:

- Outcome 1: The diversions have channel dimensions and grades with mimic the natural watercourse upstream and downstream of the diversions
- Outcome 2: The diversions maintain the existing flow regime, shown through hydraulic modelling of the 50% and 2% AEP
- Outcome 3: The diversions hydraulic conditions mimic the upstream and downstream hydraulic conditions, shown through hydraulic modelling of the 50% and 2% AEP
- Outcome 4: The diversions maintain the flow regime and hydraulic conditions, therefore sustaining the existing sediment transport of the natural watercourse
- Outcome 5: The diversions have been assessed using a hydraulic model to show they have similar flow regime and hydraulic conditions as the upstream and downstream for the 50% and 2% AEP, therefore maintaining the watercourses equilibrium and functionality.

The next stage progresses from the conceptual design to a functional design in consultation with the administering authority. Upon approval of the functional design, the permanent diversion alignments shall be included in the PRC Plan.

RFI 21

Item	Relevant Document Section	Issue or Comment	Information Requested
21	Appendix 4.6 – Rehabilitation Flood Assessments	The Planning Part identifies that several rehabilitated waste rock dumps (WRDs) are at risk of contact with floodwaters under design and extreme flood events, including some adjacent to flood-affected voids or downstream of diversion structures The flood interactions have not been assessed for erosion or structural failure under 1% AEP, 0.1% AEP, and PMF events. Where WRDs are intersected by floodwaters, it must be demonstrated, as per the PRCP Guideline and Outcome 3 of the Watercourse Diversions Guideline that: • Dumps remain stable and resist flood-induced erosion • Sediment, salinity, or contaminants will not mobilise downstream; and • Structural integrity is maintained under future climate-adjusted flood conditions.	The PRCP must meet the relevant requirements of the Watercourse Diversions Guideline and the PRCP guideline. This must include but is not limited to, demonstration that: • Dumps remain stable and resist flood-induced erosion • Sediment, salinity, or contaminants will not mobilise downstream; and • Structural integrity is maintained under future climate-adjusted flood conditions. Where the above is unable to be demonstrated, alternative designs, objectives and/or criteria must be proposed in response to this information request with sufficient detail to demonstrate the achievement of the guideline requirements and stable condition.

Please refer to Sections 3.6.1.5.4 and 3.6.1.5.5 of the PRC Plan.

The toe of rehabilitated dump landforms are generally located in areas affected by relatively low velocities of less than 1 m/s, with some isolated areas of higher velocities of less than 1.5 m/s.

IECA (2008) recommends that maximum allowable velocities for approximately 2.1 m/s for 70% vegetal cover.

The predicted velocities along the toe of the rehabilitated dumps are generally below the IECA (2008) maximum allowable velocities and therefore, the rehabilitated dump landforms are expected to remain stable under extreme flooding conditions.

RFI 22

Item	Relevant Document Section	Issue or Comment	Information Requested
22	Appendix 4.5 – Voids in Floodplain Modelling	The reports outline the hydrology and TUFLOW model setup, including grid resolution, LiDAR-derived terrain, and boundary conditions. Manning's n values are listed. Hydrologic inputs follow the guideline 'Australian Rainfall and Runoff' (2019) with a 20% climate change allowance. The modelling lacks both calibration and validation, which are essential for demonstrating reliability of flood extents and velocities used in assessing landform stability and NUMA viability. This is inconsistent with ARR 2019 Book 8 (Model Calibration and Validation) which requires confidence in modelling for decision-making regarding flood-prone landforms. The 'calibration and sensitivity analysis' of the model is required by Section 3.4 of the PRCP Guideline has not been detailed in Appendix 4.5.	Provide information of the 'calibration and sensitivity analysis' applied to the Floodplain Modelling detailed in Appendix 4.5 as required by Section 3.4 of the PRCP Guideline.

Please see Appendix E within PRC Plan Appendix 4.6 which describes the flood modelling configurations used.

The URBS hydrologic models for the Blackwater Creek (including Taurus Creek and Two Mile Gully), Burngrove Creek and Sirius Creek catchments were calibrated to recorded water levels for the April 2017 and January 2020 flood events.

The available data was insufficient to undertake a calibration of the Sagittarius Creek, Bonnie Doon Creek, Speculation Creek and Rockland Creek hydrologic models. However, the calibrated URBS model parameters from the Blackwater Creek, Burngrove Creek and Sirius Creek catchments were adopted for the Sagittarius Creek, Bonnie Doon Creek, Speculation Creek and Rockland Creek catchments.

URBS model design discharges for all catchments were validated against estimates from the Rational Method, Regional Flood Frequency Estimation model (RFFE) and Quantile Regression Technique (QRT).

Design event flood modelling for final landform conditions was undertaken based on the SSP2-4.5 year 2100 future climate conditions, which takes into account predicted increases in rainfall intensities due to climate change.

RFI 23

Item	Relevant Document Section	Issue or Comment	Information Requested
23	Section 3.3.3.1 of the Planning Part Cattle grazing (future and existing)	The administering authority's position is that grazing PMLUs should achieve a land suitability class 3 or better to align with the agricultural outcome of 'suitable land with moderate limitations' or better (as per the latest version of the Queensland Government's Guidelines for Agricultural Land Evaluation in Queensland) with class 4 being 'marginal or unsuitable land with severe limitations'. Where class 4 is proposed, further justification of what limitations will result on this class and the extent to which these limitations can be overcome with corrective actions or designs in the PRCP.	Provide for Rehabilitation Areas proposed to be a grazing PMLU that achieves a land suitability class 3 or better. Where class 4 is proposed, provide detail on the limitations that would result in the poorer class of grazing PMLU, and the extent to which these limitations can be overcome with corrective actions or designs in the PRCP.

Blackwater Coal Mine has been in operation since 1967 and has over 1,200 ha of existing cattle grazing rehabilitation. The land suitability class (LSC) cattle grazing rule set on post coal mining landforms (hereafter LSC cattle grazing rule set) was initially developed by Short (2018) *A rule-set for LSA sustainable beef cattle grazing on land rehabilitated after open-cut coal mining in the Bowen Basin Queensland* and further refined again by Short (2025) *Rehabilitated mined land suitability for beef cattle grazing in the Bowen Basin Technical Paper 1*. Blackwater Coal Mine has invested a large amount of time to monitor existing areas of cattle grazing against the LSC cattle grazing rule set. Since 2018 the following rehabilitation monitoring programs have been completed whereby areas of existing cattle grazing have been assessed against the LSC cattle grazing rule set:

- Initial Rehabilitation Monitoring Report Blackwater Mine 2018 (ELA, 2018)
- Initial Rehabilitation Monitoring Report Blackwater Mine 2019 (ELA, 2020)
- Blackwater Mine Major Rehabilitation Monitoring Report 2022 (ELA, 2023)
- BMA Blackwater Coal Mine Rehabilitation Monitoring Report FY24 (BMA, 2024a).
- Blackwater Coal Mine Woodland Habitat Rehabilitation Monitoring Report 2024 (BMA, 2024b).
- Blackwater Coal Mine Rehabilitation Monitoring Report 2024 (LEC, 2024).
- Blackwater Coal Mine Rehabilitation Monitoring Report 2025 (LEC, 2025).

Results of assessment of areas of existing cattle grazing against the LSC cattle grazing rule set are summarised in PRC Plan Section 3.1.4.2.1 (Figure 3-22) with further data analysis summarised in *Blackwater Coal Mine Rehabilitation Monitoring RFI Response 02/03/2025* (LEC, 2024) (previously provided to the administering authority as part of the Not Properly Made response relating to PRC Plan submission Rev 1). The results clearly indicate that a large portion of exiting cattle grazing rehabilitation on BWM is LSC 4 or 5. The main factors limiting the LSC scores are provided in PRC Plan Section 3.1.4.2.1 and LEC (2024), however a common factor across the majority of sites is nutrient deficiency and nutrient availability as follows:

- Nutrient deficiency (Nd):
 - Colwell P to 0.1m
- Nutrient availability and toxicity (Nr)
 - pH in 0.1m

Other limiting factors include:

- Water availability (M)

- Soil water storage (mm)
- Subsoil erosion (Eb)
 - ESP (%) at 0.5 m depth
- Microrelief (Tm)
 - Vertical interval (m)
- Water erosion (Ea)
 - Slope (%), ESP <6 (%) in 0-0.1 m soil depth increment with slopes >12-18
 - Slope (%), ESP >6-14 (%) in 0-0.1 m soil depth increment with slopes >10-12
 - Slope (%), ESP >14 (%) in 0-0.1 m soil depth increment with slopes >4-6

Only a single site was limited by Salinity (S) with E_{Ce} (dS/m) in ERD (0-0.6 m depth increment) >10.

It is important to note that the BWM cattle grazing reference sites are also limited by moderately alkaline soils pH in 0.1m and lower available Phosphorus (Colwell P) in 0.1m as follows:

- BWM_REF03 is limited by lower available Phosphorus (Colwell P) in 0.1m <5 mg/kg
- BWM_REF01-1A is limited by lower available Phosphorus (Colwell P) in 0.1m 5.5 mg/kg and moderate alkaline soils with an average of 8.7 pH in 0.1m

Refer to PRC Plan Section 3.6.1.8.6 (Cattle grazing reference sites) for a full summary of the BWM cattle grazing reference sites as it relates to the following: mean slope, total groundcover, native tree, shrub, grass, invasive species, dry matter yield, land condition, and land suitability class.

The DETSI RFI requests “for Rehabilitation Areas proposed to be a grazing PMLU that achieves a land suitability class 3 or better” and “where class 4 is proposed, provide detail on the limitations that would result in the poorer class of grazing PMLU, and the extent to which these limitations can be overcome with corrective actions or designs in the PRCP.”

Firstly, it is recommended that where cattle grazing sites are limited by the same factors as the surrounding reference sites the following milestone is applied:

- areas of cattle grazing PMLU rehabilitation achieve a land suitability class ≤3 or if LSC ≥4 then these sites are accepted to have achieved sustainable cattle grazing PMLU if limited by the same factor as reference sites scored in accordance with *Rehabilitated mined land suitability for beef cattle grazing in the Bowen Basin: Technical Paper (Short, 2025)*. This is proposed in PRCP Schedule RM7.16.

It is important to note the several limiting factors including pH in 0.1, subsoil erosion, PAWC and salinity are impractical or unable to be ameliorated after rehabilitation has been completed.

Amelioration of existing cattle grazing is limited to surface treatments (i.e. re-ripping, slashing, fertilisation, and reseeding) which can only address limitations associated with micro-relief, nutrient availability for Colwell P however is unlikely to majorly affect other inherent limiting factors (i.e. pH in 0.1m, PAWC, subsoil erosion). For this reason, for existing cattle grazing areas that are limited by factors unlikely to be ameliorated it is recommended that cattle grazing land condition is included in the rehabilitation milestone. The cattle grazing land condition is listed in the “*Queensland Government Reef Protection Regulations Farming in Reef Catchments Cattle Grazing Guide* (Qld Government , 2022).” The land condition ABCD framework and the Stocktake framework are tools used in Queensland to manage grazing land and improve its condition. The ABCD framework assesses land condition on a scale of A (excellent) to D (degraded), while the Stocktake framework, specifically the Stocktake Plus app, helps graziers manage their grazing practices and improve productivity and sustainability. The Department of Agriculture and Fisheries (DAF) (formerly DEEDI) has been involved in developing and promoting both of these frameworks.

It is therefore recommended that where existing cattle grazing sites are limited by factors resulting LSC ≥4 not associated with an existing reference site, they must achieve a cattle grazing land condition score of good (A) condition or fair (B) as scored against the “*Queensland Government Reef Protection Regulations Farming in Reef Catchments Cattle Grazing Guide* (Qld Government , 2022) and Stocktake Plus method.”

PRC Plan Section 3.1.4.2.1 (Figure 3-23 summarises the results of existing areas of cattle grazing rehabilitation and BWM cattle grazing reference sites scored against the "Queensland Government Reef Protection Regulations Farming in Reef Catchments Cattle Grazing Guide (Qld Government , 2022).” The results indicate the reference sites are in Fair (B) and condition and the majority of the existing rehabilitation is also in Good (A) or Fair (B) land condition. Existing cattle grazing scoring poor (C) land condition would therefore require amelioration (i.e. re-ripping, slashing, fertilisation, and reseeding) to improve land condition to be assessed as having achieved a sustainable PMLU condition.

References:

- BMA. (2024a). *BMA Blackwater Coal Mine Rehabilitation Monitoring Report FY24*. Brisbane: BMA.
- BMA. (2024b). *Blackwater Coal Mine Woodland Habitat Rehabilitation Monitoring Report 2024*. Brisbane: BMA.
- ELA. (2018). *Initial Rehabilitation Monitoring Report Blackwater Mine 2018*. Brisbane: ELA.
- ELA. (2020). *Initial Rehabilitation Monitoring Report Blackwater Mine 2019* . Brisbane: ELA.
- ELA. (2023). *Blackwater Mine Rehabilitation Monitoring Report* . Brisbane: Ecological Australia .
- LEC. (2024). *Blackwater Coal Mine Rehabilitation Monitoring Report 2024*. Brisbane : Lyngco Environmental Consulting .
- Qld Government . (2022). *Reef Protection Regulations Farming in Reef Catchments Grazing Guide Version 2*. Brisbane : Qld Government .
- Short. (2023). *Rehabilitated mined land suitability for beef cattle grazing in the Bowen Basin Technical paper 1*. Brisbane: Office of the Queensland Mine Rehabilitation Commissioner.

RFI 24

Item	Relevant Document Section	Issue or Comment	Information Requested
24	Section 3.1.2.8 of the Planning Part - Land stability	Land stability described in the PRCP is limited to a high-level description of erosion potential, for example 'The pre-mining topography at BWM was generally flat to undulating and is consistent with the regional landscape. Land adjacent to the mine and within the Bowen Basin indicates surface erosion is common upon disturbance of soils and vegetation from cattle grazing' (Whitehaven 2024, p. 59). This appears to largely duplicate the information at 'Section 3.1.2.11 Pre-mining land use'. Section 3.1 of the PRCP Guideline requires land stability to include information on the 'pre-existing land degradation/erosion and predisposition to ongoing stability issues'.	Provide a revised Planning Part which addresses the requirements of Section 3.1 of the PRCP Guideline for land stability including information on the pre-existing land degradation/erosion and predisposition to ongoing stability issues.

Section 3.1.2.8 of the PRC Plan has been updated to address the above information request. Updated information includes details on pre-mining land uses and land stability issues related to erosion and degradation within specific Land Resource Areas. The update also highlights anticipated ongoing stability issues post-mining.

RFI 25

Item	Relevant Document Section	Issue or Comment	Information Requested
25	Section 3.1.4.2 of the Planning Part - Existing rehabilitation	Further detail is required as to the rehabilitation of the 1,929 ha of existing rehabilitation. Limited information is provided as to the when the rehabilitation commenced and was completed a requirement of section 3.1 of the PRCP guideline. This is required to support the timeframes proposed for the completion of rehabilitation milestones. The response to the NPM notice provided additional information regarding the monitoring of rehabilitation. The response noted some reports in relation to the monitoring of these areas. These reports are sought to support the provided report on existing rehabilitation. With consideration of other matters raised in this information request, further information is required to demonstrate the existing rehabilitation has achieve the milestones that such area is excluded from in the draft PRCP schedule. The PRCP guideline is noted to not require this information, however, the PRCP schedule must demonstrate the achievement of stable condition for all areas that will form part of the PRCP schedule at decision. Where a milestone is not considered to be applicable or otherwise met, justification of such is required. This information is sought to ensure that the milestones proposed in the schedule for existing rehabilitation areas are able to be achieved and are appropriate for demonstrating stable condition. For areas of grazing PMLU The Planning Part states that areas of existing rehabilitation for cattle grazing in place before the development of this PRCP (RA7) will be assessed against the indicators associated with land	(a) Provide a revised Planning Part which details when all rehabilitation works commenced and were completed in each area of existing rehabilitation described in 'Section 3.1.4.2 Existing rehabilitation' of the PRCP guideline (or indicative timeframes of the age of the rehabilitation). (b) Provide detail of the capacity of the existing rehabilitation to achieve milestones of the draft PRCP schedule, the Biocondition benchmarks (for Woodland Habitat PMLUs) and a land suitability class of 3 or better.

		condition as described in the Queensland Reef Protection Regulations Farming in Reef Catchments Grazing Guide (DES, 2022a). However, this guide is not considered an appropriate measure with reference to the following : • The purpose of the guide is to 'support graziers to meet requirements in accordance with the Agricultural Environmentally Relevant Activity (ERA) standard for beef cattle grazing – version 2'. It is not intended to inform assessment of potential land use against relevant limitations as is the purpose of the Guidelines for agricultural land evaluation in Queensland (DSITI & DNRM 2015). • The Office of the Queensland Mine Rehabilitation Commissioner (OQMRC) recognises the Land Suitability Assessment (LSA) approach as leading practice to support assessment of the suitability of rehabilitated mined land for beef cattle grazing (OQMRC 2024). The Rehabilitation Monitoring NPM notice response indicates that few of the rehabilitation sites are achieving a class 3, with most being a class 4 or 5, noting that not all the areas would have a PMLU of cattle grazing.	
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The existing rehabilitation section of the PRC Plan (Section 3.1.4.2) has been updated to reflect the status of the existing rehabilitation on BWM as a result of the following monitoring programs:

- Initial Rehabilitation Monitoring Report Blackwater Mine 2018 (ELA, 2018)
- Initial Rehabilitation Monitoring Report Blackwater Mine 2019 (ELA, 2020)
- Blackwater Mine Major Rehabilitation Monitoring Report 2022 (ELA, 2023)
- BMA Blackwater Coal Mine Rehabilitation Monitoring Report FY24 (BMA, 2024a).
- Blackwater Coal Mine Woodland Habitat Rehabilitation Monitoring Report 2024 (BMA, 2024b).
- Blackwater Coal Mine Rehabilitation Monitoring Report 2024 (LEC, 2024).
- Blackwater Coal Mine Rehabilitation Monitoring Report 2025 (LEC, in draft).

Additional summary of the status of existing rehabilitation has previously been provided to the administering authority in the detailed report: *Blackwater Coal Mine Rehabilitation Monitoring RFI Response 02/03/2025* (LEC, 2024) (provided as part of the Not Properly Made response relating to PRC Plan submission Rev 1).

It is recommended that areas of existing cattle grazing rehabilitation are assessed as discussed in RFI 23. The DETSI point regarding land condition is noted however it is recommended that in the absence of the ability to improve certain LSC limitations in existing rehabilitation it is used to ensure cattle grazing rehabilitation land condition is assessed at least to the standard of surrounding grazing lands. Furthermore, much of the historic cattle grazing rehabilitation on BWM was undertaken prior to the introduction of the LSC cattle grazing rule

set as per Short (2018) and is therefore recommended these historic areas should be assessed against land condition if unable to meet LSC ≤ 3 .

It is further recommended that any areas of existing woodland habitat are also assessed as per the current transitional PRCP criteria for woodland habitat in the BWM EA. Rehabilitation monitoring between 2022-2024 indicates that the majority of existing woodland habitat rehabilitation has ≥ 2 tree species, ≥ 3 shrub species, $\geq 16\%$ tree canopy cover and total ground cover (%) over slope consistent with the EA requirements. It is suggested impractical for areas of historic woodland to be assessed against updated methods such as modified BioCondition scores. The modified BioCondition milestones are a new concept and untested and suggest that only new areas of woodland habitat rehabilitation are assessed against these milestones over time with the results of monitoring to inform ongoing improvements as required.

References:

BMA. (2024a). *BMA Blackwater Coal Mine Rehabilitation Monitoring Report FY24*. Brisbane: BMA.

BMA. (2024b). *Blackwater Coal Mine Woodland Habitat Rehabilitation Monitoring Report 2024*. Brisbane: BMA.

ELA. (2018). *Initial Rehabilitation Monitoring Report Blackwater Mine 2018*. Brisbane: ELA.

ELA. (2020). *Initial Rehabilitation Monitoring Report Blackwater Mine 2019*. Brisbane: ELA.

ELA. (2023). *Blackwater Mine Rehabilitation Monitoring Report*. Brisbane: Ecological Australia.

LEC. (2024). *Blackwater Coal Mine Rehabilitation Monitoring Report 2024*. Brisbane : Lyngco Environmental Consulting.

RFI 26

Item	Relevant Document Section	Issue or Comment	Information Requested
26	Section 3.4.5 of the Planning Part - Regional planning integration	'Section 3.4.5 Regional planning integration' of the Planning Part discusses how the NUMAs are consistent with the Central Queensland Regional Plan 2013 and the Rural Zone mapping prescribed by Council. No discussion is provided in Section 3.4.5 on whether the NUMAs are consistent with the Water Plan (Fitzroy Basin) 2011.	In accordance with s126C(1)(d) of the EP Act and Section 3.3 of the PRCP Guideline, provide a revised Planning Part which considers whether the NUMAs will be consistent with the Water Plan (Fitzroy Basin) 2011.

Section 3.4.5.3 of the PRC Plan has been updated to address the information request.

RFI 27

Item	Relevant Document Section	Issue or Comment	Information Requested
27	Section 3.5.1.8 of the Planning Part - Revegetation	Details on site preparation strategies have not explicitly been included in 'Section 3.5.1.8 Revegetation' of the Planning Part. As per subheading 'Revegetation' in Section 3.6.1 of the PRCP Guideline, the Planning Part must include details of the site preparation required for rehabilitation activities.	Provide a revised revegetation plan which includes all details of the site preparation for rehabilitation activities as required by Section 3.6.1 of the PRCP Guideline.

The site preparation required for rehabilitation activities is clearly detailed in order of sequence in Rehabilitation Milestones RM1 – RM6 in the PRCP Schedule. A summary of the planning and execution process for individual rehabilitation areas provided in Section 3.6.1.8.2 of the PRC Plan.

RFI 28

Item	Relevant Document Section	Issue or Comment	Information Requested
28	Section 3.5.2 of the Planning Part - Tailings storage facilities	The PRCP lacks the following being requirements of Section 3.6.2 of the PRCP Guideline: • The Planning Part states that, 'by the time a TSF reaches closure, the tailings will have settled and hence settling is not an important property in the context of rehabilitation and closure planning'. This is not a sufficient justification for the lack of consideration of settling in section 3.5.2.2.3 Geotechnical characteristics. • Soil water characteristic curve appears limited to three of the six TSFs as illustrated in 'Figure 40 Tailings SWCC results'. • Column testing does not appear to have been discussed.	Provide a revised Planning Part which addresses Section 3.6.2 of the PRCP Guideline including: • evidence-based responses including modelling which confirms why settling testing is not a relevant consideration for the TSFs. • soil water characteristic curve for all TSFs. • column testing.

Section 3.6.2 of the PRCP Guideline requires that geotechnical characteristics be addressed to a level of detail appropriate to the nature of the waste, the level of risk, and the stage of the project. The PRC Plan has been prepared on this basis and adopts a staged, risk-based approach consistent with accepted industry practice and other approved PRC Plans.

Section 3.6.1.6.6 of the PRC Plan considers tailings consolidation and settlement behaviour. This section recognises that consolidation settlement varies spatially and temporally as a function of tailings depth, water content (or density) profile, drainage conditions, and cover thickness, and that consolidation occurs over long timeframes. It further acknowledges that these controlling factors vary throughout the three-dimensional tailings deposit and will continue to evolve during the operational life of each TSF.

The PRC Plan adopts a conceptual, performance-based approach to settlement at this stage. Rather than relying on early-stage quantitative settlement estimates that would be highly uncertain and not representative of end-of-life conditions, the PRC Plan proposes that anticipated settlement be managed through cover system design.

As outlined in PRC Plan Section 3.6.1.6.6, the magnitude and rate of consolidation settlement depends on factors such as tailings composition, pre-consolidation history, and drainage pathways, which cannot be reliably characterised until tailings deposition is substantially complete. On this basis, quantitative settlement modelling is not included in the conceptual cover designs and is instead deferred to the detailed closure design phase, where representative tailings properties will be available.

Settlement assessment and design allowance will be undertaken as part of the detailed landform closure design reports discussed in RFI#16 which are to be prepared in accordance with PRCP Schedule Condition PRCP14, no less than three months prior to commencement of RM3 for each relevant structure.

Soil water characteristic curve (SWCC) testing is presented in Section 3.6.2.2.3 of the PRC Plan for representative TSFs to characterise tailings hydraulic behaviour at a conceptual level. It is considered SWCC testing for every individual TSF is not required where tailings characteristics, deposition methods, and risk profiles are broadly comparable.

Consistent with the staged approach adopted for cover system design and settlement assessment, additional site-specific SWCC testing will be undertaken where required to support detailed closure design when TSFs approach closure and final cover configurations are being developed.

In terms of column testing, this is typically undertaken to inform detailed assessments of seepage, oxidation, and cover performance once final cover configurations, tailings characteristics, and material sources are known. At this stage, where TSFs are decades away from closure and only conceptual cover designs are presented, column testing would be premature and not proportionate to the current level of risk or design maturity.

The staged approach adopted in the PRC Plan is secured through proposed PRCP Schedule Condition PRCP14, which requires an AQP to prepare landform closure design reports prior to commencement of RM3 for each relevant structure (for the TSF and rejects discussed in Section 3.6.2 of the PRC Plan). This condition ensures that at the appropriate time, detailed investigations and modelling (including settlement behaviour, SWCC testing, column testing, and cover performance assessment) will be undertaken using representative materials and contemporary best-practice methodologies.

RFI 29

Item	Relevant Document Section	Issue or Comment	Information Requested
29	Section 3.5.3.5 of the Planning Part Appendix 4.8 Landform Design	Section 3.5.3.5 of the Planning Part indicates that lowwall slopes will be left at angle of repose. No information has been provided that this will result in acceptable levels of stability. Appendix 4.8 provides erosion modelling predictions and recommendations for lowwall slopes up to 30% gradient, and indicates that a degree of vegetation cover will be required to ensure stability. This information does not appear to have been used to inform or support the proposed final landform design for lowwalls. The OQMRC has published guidance material on best practice for management of non-use management areas, including advice on treatments for ensuring erosional stability. It is expected that erosion occurring within the NUMA will not impact on adjacent RA's or structures. Insufficient information has been provided to demonstrate that this will be achievable.	Provide revised PRC Plan that includes appropriate landform design and treatments for void lowwalls that are supported by the findings of Appendix 4.8, as well as appropriate milestone criteria, with consideration given to the advice published by the OQMRC on best practice for management of NUMAs. It must be demonstrated that the slopes of the lowwalls will not impact on the achievement of the adjacent rehabilitation area and achieves a geotechnically stability appropriate for the environmental and longterm risk.

The configuration of the NUMAs and adjacent landforms has been revised in the updated PRC Plan and Void Closure Plan (VCP) (Appendix 4.14) to align with the Management of Coal Mine Voids as Non-Use Management Areas (QMRC, April 2025).

As explained in Sections 3.4.2 and 3.4.3 of the updated PRC Plan, multiple iterations of mining planning and rehabilitation design, as well as detailed geotechnical and landform assessments have been undertaken to maximise the area assignable to a PMLU while maintaining long-term safety and stability. This PRC Plan has seen a reduction in the total NUMA area from approximately 3,967 ha to 3,178 ha for a total reduction in NUMA area of 789 ha.

The final NUMA boundaries have been set to include only those slopes and pit floor surfaces that are too steep, unstable or unsafe for rehabilitation. It is not safe / practical / achievable to revegetate NUMA lowwalls at BWM for the following reasons:

- The depth and geometry of remaining voids, which exceed the safe angle of repose for reprofiling;

- Geotechnical constraints preventing reshaping of the pit floor and lower benches to meet rehabilitation slope requirements; and
- The need to maintain wall stability and avoid unacceptable geotechnical risks if additional slope reduction were attempted.

All accessible and stable upper slopes and surrounding catchment areas have been incorporated into the PMLU footprint for revegetation.

The PRC Plan has been updated to address the information request as follows:

- Low-wall stability, including final slope geometry and supporting geotechnical assessments, is addressed in PRC Plan Section 3.6.3.2.1 and in Section 7.2 of the VCP.
- Long-term erosional stability of the final landform, including the PMLU low-walls, is discussed in PRC Plan Section 3.6.1.5.6.
- Drainage design that prevents concentrated flows onto NUMA low-wall batters and protects adjacent RAs is addressed in Sections 3.6.1.5 and 3.6.1.7. With these controls in place, erosion of the NUMA low-walls was considered to present a material risk to long-term geotechnical stability.

RFI 30

Item	Relevant Document Section	Issue or Comment	Information Requested
30	Section 3.5.3 of the Planning Part Appendix 4.8 Landform design	Section 3.5.3 of the Planning Part does not include any discussion or consideration of erosional stability of void highwall and endwall crests and ramp batters proposed to remain as constructed. The upper strata exposed at these crests are extremely erodible, and erosional instability has the potential to impact on adjacent critical structures (e.g. safety bunds and fences) or rehabilitation areas and can increase geotechnical instability. More information is required to demonstrate that these risks have been adequately understood and managed.	Provide revised PRCP that includes sufficient technical investigation of erosion risk on void wall crests and batter slopes of ramps proposed to be retained, with consideration given to advice published by the OQMRC. Appropriate milestone criteria required to ensure necessary treatments are implemented and stability can reasonably be expected.

Refer to response to RFI 29.

The PRC Plan has been updated to address the information request as follows:

- Low-wall stability, including final slope geometry and supporting geotechnical assessments, is addressed in PRC Plan Section 3.6.3.2.1 and in Section 7.2 of the VCP.
- Long-term erosional stability of the final landform, including the PMLU low-walls, is discussed in PRC Plan Section 3.6.1.5.6.
- Drainage design that prevents concentrated flows onto NUMA low-wall batters and protects adjacent RAs is addressed in Sections 3.6.1.5 and 3.6.1.7. With these controls in place, erosion of the NUMA low-walls was considered to present a material risk to long-term geotechnical stability.

RFI 31

Item	Relevant Document Section	Issue or Comment	Information Requested
31	Section 3.5.3 of the Planning Part Appendix 4.8 Landform design	It is unclear whether ramp batters will be pushed down and treated to achieve an erosionally stable condition (as per Appendix 4.8) and assigned a PMLU or left at the angle of repose and included in NUMAs. If ramp batters are intended to be left at angle of repose and included in the NUMA, more information is required to demonstrate how this is consistent with the intention of minimising NUMA extent.	Provide a revised PRC Plan inclusive of: (a) Further information to clarify whether ramp batters are included in NUMA's or assigned a PMLU, (b) A detailed description and justification of the final landform characteristics and treatments proposed for ramp batters; and Figures to clearly illustrate the proposed final landform and PMLU arrangement.

Since issuance of the information request, a major landform redesign has been undertaken and is reflected in the updated PRC Plan submitted with this response.

Under the revised landform design presented in PRC Plan Rev 2, pit ramps are no longer retained as discrete long-term landform features. All pit ramps are either:

- infilled or partially infilled during dumping and subsequently dozed down; or
- dozed down following completion of mining to achieve a stable final grade.

Accordingly, ramp batters are not designated as NUMAs. Therefore all former ramp areas are incorporated into the final landform and assigned an appropriate PMLU consistent with surrounding rehabilitated areas.

Spatial data and included in the revised PRC Plan mapping illustrate the final landform configuration and PMLU allocation, including the incorporation of former ramp areas into rehabilitated landforms.

RFI 32

Item	Relevant Document Section	Issue or Comment	Information Requested
32	Appendix 4.16 – Underground Geotechnical Considerations	Underground workings The Transitional PRC Plan Hydrogeology Assessment (SLR 2024a) provided as Appendix 4.2 of the Planning Part identifies an additional underground area referred to as 'Augering Underground workings'. The Augering workings do not appear to have been identified or discussed in the Appendix 4.16.	Clarify why the Augering workings have not been considered in the Planning Part or supporting Appendix 4.16. Include additional geotechnical studies to align with the outcomes of the appendix.

Information relating to augering workings has been incorporated into PRC Plan Section 3.6.4.1, with supporting geotechnical assessment provided in.

Byrnes Geotechnical (2025) conducted a geotechnical analysis using a simplified, fit-for-purpose geotechnical stability model appropriate to the scale and configuration of the augering. The assessment concluded that:

- The auguring in Ramp 82/84S was not highwall augering – it was not in a highwall and was not designed for high resource recovery.
- The auger layout involved holes at 4.5 m centres resulting in high levels of overall stability.
- Any collapse of the auger holes will extend to a maximum of 5 m height

From the above it can be concluded that this augering does not present a surface subsidence hazard for mine closure.

The simplified geotechnical model used to assess auger pillar stability, together with the supporting analysis and conclusions, is provided in Appendix 4.17.

RFI 33

Item	Relevant Document Section	Issue or Comment	Information Requested
33	Section 3.5.4.3 of the Planning Part - Surface deformations Appendix 4.16 – Underground Geotechnical Considerations.	Vegetation/habitat impact assessment for the underground workings is limited to a qualitative statement that 'it was observed during the inspection that the cracking does not appear to have adversely impacted vegetation growth' (Byrnes Geotechnical 2024, p. 23). These qualitative findings are reiterated at 'Section 3.5.4.3 Surface deformations. For the purpose of Section 3.6.4 of the PRCP Guideline, the assessment of vegetation/habitat impacts should include: • damage to vegetation in the vicinity of surface cracks. • impacts associated with changed hydrogeological characteristics. Surface ponding in the context of underground workings has not been discussed in the Planning Part or Appendix 4.16.	Provide an assessment of vegetation/habitat impacts in accordance with Section 3.6.4 of the PRCP Guideline which should include assessment of: • damage to vegetation in the vicinity of surface cracks. • impacts associated with changed hydrogeological characteristics. • Surface ponding in the context of underground workings or the Geotechnical considerations for closure of the underground panels at Blackwater.

Section 3.6.4 of the PRC Plan has been updated to address the above information request.

RFI 34

Item	Relevant Document Section	Issue or Comment	Information Requested
34	Section 3.5.1.8.5 of the Planning Part - Woodland habitat vegetation	The following issues were noted in the selection of species and seeding rates chosen for the Cattle Grazing, Woodland habitat and Watercourse PMLUs: • Couch (<i>Cynodon dactylon</i>) should not be included due its potential to outcompete native species in PMLU Woodlands • Shrubby Stylo (<i>Stylosanthes hamata</i>) should not be included in a Cattle Grazing PMLU due its potential to outcompete native species in adjacent PMLU Woodlands	Provide a revised Planning Part with species and seeding selected in consideration for competition with native species.

Couch (*Cynodon dactylon*) is a naturalised common species and strongly stoloniferous and salt tolerant (DERM , 2011) and will provide early stabilization. Couch is however not as competitive as other pasture species and is expected to ultimately be outcompeted by the establishment of deeper-rooted and competitive tussock grasses. Couch is also common across many regional ecosystems including RE11.35 and RE11.3.27 (Queensland Herbarium, 2018). For the aforementioned reasons, couch grass is recommended to be included in all revised seed mixes.

Oversowing legumes into pastures is a cost-effective way of increasing production. Stylos are commonly used (DAF, 2009). Legumes are critically important in cattle grazing system to fix nitrogen from the atmosphere through a symbiotic relationship with rhizobia bacteria in nodules on their roots. Nitrogen fixation creates higher protein levels in legumes than in grasses thereby providing better feed quality for cattle. When a pasture legume is grazed or parts of the plant die or break off, it begins to breakdown and the nitrogen from that plant matter is mineralised by soil microbes and becomes available to nearby grasses, leading to better grass growth (DAF, 2022). Legumes that are fixing nitrogen benefit grazing systems by directly improve diet quality and they increase the amount of nitrogen available to companion grasses, resulting in higher yields and better-quality grass. *Stylosanthes* species have been sown and naturalised in Central Queensland as evidence by the presence in many regional ecosystems (Queensland Herbarium, 2018).

The three main *Stylosanthes* species recommended for central Queensland (DAF, 2022) include Shrubby stylo (*S. scabra*), Caatinga stylo (*S. seabrana*) or Caribbean stylo (*S. hamata*). Shrubby stylo (*S. scabra*) has not been included in the cattle grazing mix noting the DETSI comment to remove, however the remaining two species including Caatinga stylo and Caribbean stylo have been retained with common names updated. Furthermore, the rate of sowing for Stylo species has been reduced to 1kg p/ha. Wynn Cassia (*Chamaecrista rotundifolia*) and other tropical and sub-tropical creeping legumes have however been removed from the cattle grazing list due to their ability to establish in dense swards and outcompete preferred pasture species if ungrazed.

References:

DAF. (2009). Pasture management for the Burnett catchment. Brisbane : Department of Agriculture and Fisheries .

DAF. (2022). Stylos in Queensland. An identification and suitability guide for graziers and advisers. Brisbane: State of Queensland (Department of Agriculture.

DERM . (2011). Salinity Management Handbook. Brisbane : Qld Government .

Queensland Herbarium. (2018). Regional Ecosystem Technical Descriptions - Brigalow Belt. Brisbane: Department of Environment and Science.

RFI 35

Item	Relevant Document Section	Issue or Comment	Information Requested
35	Section 3.3.3.2 Woodland Habitat (future and existing) Section 3.7.1 Rehabilitation monitoring program	Woodland habitat PMLU is planned for elevated landforms associated with the spoil dumps (RA1), and general disturbance areas near existing vegetation communities (RA5). The total proposed woodland habitat PMLU area is approximately 22,590 ha. Section 3.3.3.2 of the Planning Part proposes that the PMLU woodland habitat revegetation to achieve characteristics of RE 11.7.2. Where woodland habitat is aligned to RE11.7.2 is not possible due to seed availability, soils or spoils variability, the remaining areas of woodland habitat have been planned based on a 'hybrid' woodland habitat ecosystem. Section 3.7.1.3.2 of the Planning Part, Landform and erosion, includes methods for monitoring RE 11.7.2., using QBEIS Tertiary level assessment and modified BioCondition. However, the intention to monitor the hybrid RE 11.5.3/11.5.9 using existing minimal criteria is unsatisfactory. It is unclear what proportion of the Woodland PMLU will be allocated to RE 11.7.2 versus the hybrid (11.5.3/ RE 11.5.9). Further information is required to determine whether this PMLU will achieve a stable condition. The administering authority does not consider the approach to satisfactorily assurance the achievement of an appropriate PMLU due to the lack of clear ecosystem outcome resulting from a hybrid ecosystem. Defined regional ecosystems which assessment against BioCondition benchmarks is the recommended approach. Consideration should also be given to the EA conditions in conjunction with the BioCondition benchmarks while ensuring that the PMLU achieves stable condition.	Provide a revised Planning Part which includes BioCondition assessments for the relevant regional ecosystems which are the target PMLU outcome. Refer to the attached modified BioCondition benchmark framework and draft PRCP schedule to develop BioCondition benchmarks and include a robust monitoring program in alignment with BioCondition assessments.

In response to the information request, the planned woodland habitat revegetation and monitoring and milestones has been revised to target key representative regional ecosystems in accordance with the Native ecosystem rehabilitation in Queensland Implications for leading practice (QMRC, 2023). For all future woodland habitat, a modified BioCondition approach to assessing performance against for achievement of PMLU to a safe, stable, non-polluting and self-sustaining condition has also been prepared considering DETSI comments and the Evaluating native ecosystem rehabilitation options in Queensland (Spain C., Nuske, Gagen, & Purtill, 2023) publication. Refer to updates to woodland habitat revegetation Section 3.6.1.8.7 as well as monitoring 3.8.1.5.

It is however important to note that due the size and scale of BWM and the variation in soils and spoils it is too difficult to map individual REs for the life of the mine in rehabilitation area one (RA1). The determination of target REs for woodland habitat rehabilitation will be required to be determined by an AQP based on the soils and spoils and commercial availability of seed species. Guidance has been provided based on revised species lists derived from key framework tree, woody understory and grasses listed in representative regional ecosystem technical descriptions (Queensland Herbarium, 2018) as well as the following soils and spoils for the target regional ecosystems:

- Red ferrosols, gravels and lateritic derived materials and/or rocky substrates RE11.7.2
- Sandy loams to clay loams on rocky Tertiary or Permian spoils RE11.5.9
- Loams to clay loams on Tertiary or Permian spoils RE11.5.3.

The seed lists provided in Attachment 2 of the PRCP Schedule have been revised with an update to Woodland and Watercourse species lists, (see Tables 2-4).

PRCP Schedule RM7 criteria has been updated with reference to Attachment 5 which has also been prepared to support the modified BioCondition methods for representative regional ecosystems to be updated in revised rehabilitation milestones for future woodland habitat rehabilitation. It is important to note existing woodland habitat rehabilitation area (RA6) milestones have been developed based on existing EA criteria transitioned into the PRC Plan and Schedule.

QMRC. (2023). Native ecosystem rehabilitation in Queensland Implications for leading practice . Brisbane: Queensland Mine Rehabilitation Commissioner (QMRC).

Queensland Herbarium. (2018). Regional Ecosystem Technical Descriptions - Brigalow Belt. Brisbane: Department of Environment and Science.

Spain, C., Nuske, S., Gagen, E., & Purtill, J. (2023). Evaluating native ecosystem rehabilitation options in Queensland. Queensland Government: Office of the Queensland Mine Rehabilitation Commissioner.

RFI 36

Item	Relevant Document Section	Issue or Comment	Information Requested
36	Section 3.3.3.2 Woodland Habitat (future and existing) Section 3.7.1 Rehabilitation monitoring program	Given the importance of riparian systems for landscape connectivity and fauna habitat (e.g. high value feed trees for koala), the vegetation component of the Watercourse PMLU monitoring method of the Planning Part isn't sufficient as the vegetation community composition is not specifically monitored. BioCondition assessment against RE 11.3.25 benchmark values should be conducted in addition to the IDC methods.	Propose BioCondition assessments for the vegetation communities of the Watercourse PMLU against an appropriate RE. RE 11.3.25 is recommended. Refer to the attached modified BioCondition benchmark framework and draft PRCP schedule to develop BioCondition benchmarks and include a robust monitoring program in alignment with BioCondition assessments.

PRC Plan sections 3.8.1.5 and 3.8.2, and PRCP Schedule RM7 and Attachment 5 have been updated to include a modified BioCondition assessment and criteria for all future woodland habitat and watercourse rehabilitation at BWM.

It is important to note existing woodland habitat rehabilitation areas (RA6) have been developed based on the existing EA criteria (Land outcome document) transitioned into the PRC Plan and Schedule. RA6 milestones for existing rehabilitation does not include BioCondition assessment criteria.

RFI 37

Item	Relevant Document Section	Issue or Comment	Information Requested
37	Section 3.7.1.3.6 of Planning Part - Woodland habitat specific rehabilitation parameters Section 3.5.1.8.5 of the Planning Part - Woodland habitat revegetation Section 3.5.1.8.4 of the Planning Part - Cattle grazing revegetation Section 3.7.1.3.1 of the Planning Part - Reference sites	Note that while the PRCP plan states that BioCondition methods are to be used for monitoring Woodland PMLU rehabilitated with RE 11.7.2 (p 211), there are no criteria that identify the BioCondition score that must be achieved. Ensure that monitoring and conditions are explicit about identifying native v non-native grasses. For monitoring to effectively inform adaptive management of mine site rehabilitation, and appropriately report progress, native and non-native grasses must be reported separately. Ensure that monitoring and conditions are explicit about "invasive plants" v "non-native cover". BioCondition requires non-native cover to be assessed and that includes all non-native species, not only declared weeds. Section 3.7.1.3.1 states that reference sites for PMLUs won't be selected until Yr 1 of monitoring. They should be designated in the PRC plan. The map on p215 shows only two reference sites for grazing and two for woodland (though Table 56 shows four woodland reference sites). Two reference sites are not enough. There needs to be at least three for each target RE. Should Blackwater adopt an approach to vegetation criteria that fulfills the department's expectations regarding BioConditioning, reference sites will have reduced importance, and the proposed sites may be sufficient.	Provide an updated Planning Part and schedule that includes: (a) Condition BioCondition-based monitoring and criteria for Woodland PMLU (RE 11.7.2; RE 11.5.3/11.5.9 hybrid) and Watercourse PMLU (RE 11.3.25). (b) Condition width of the Watercourse PMLU (RE 11.3.25) e.g. at least 50m out from the high bank. (c) Consider a wider selection of species in the seed mixes for each RE. Consider the habitat requirements of the conservation-significant species identified on site and incorporate these into the rehabilitation plans e.g. ensure high seeding rate of koala food species occurring in each RE. (d) Condition reuse of logs and tree stumps as shelter for fauna in rehabilitated areas. There are no plans or references to this in the PRCP. (e) Incorporate shade/habitat trees in the grazing PMLU.

		However, if Blackwater prefers to focus on reference-sites based criteria, local reference sites will be very important for understanding local environmental conditions and interpreting monitoring results	
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The following information is provided to address the information request:

Response to item (a): see the responses provided in RFI#35 and #36. BWM have accepted and included a modified BioCondition method and completion criteria for 'future' woodland habitat whereby the BioCondition assessment demonstrates achievement of an overall score of ≥ 33 out of a possible 60 for the woodland habitat PMLU and an overall score of ≥ 30 out of a possible 60 for the watercourse PMLU. The relevant representative regional ecosystems are listed in Attachment 5 of the PRCP Schedule.

Response to item (b) The DETSI suggestion to extend the width of PMLU (RE 11.3.25) e.g. at least 50 m out from the high bank does not align with the natural form of RE11.3.25 which only extends up to 20-25 m and then turns into an alluvial flood plan RE such as RE11.3.2 or 11.3.4. It is therefore recommended a maximum of 25 m from the high bank is accepted (i.e. 25 m each side of a watercourse PMLU).

Response to item (c) Revegetation seed mix tables have been reviewed and updated in the PRC Plan and PRCP Schedule (Attachment 2) in consideration of the likely commercial availability of species. Specific updates to the mix have included greater diversity of native grasses as well as updates to tree and shrub species with notes form including of mandatory framework species for representative REs. Additional updates have also been provided for rates based on pure live seed percentages. Pure Live Seed (PLS) (Pedrini, D'Agui, Arya, Turner, & Dixon, 2022) refers to the percentage of viable seeds within a seed lot that are capable of germination, accounting for both purity and germination rate as per the figure below. This is also described in Section 3.6.1.8.7 of the PRC Plan.

$$\text{Pure live seed (\%)} = \frac{\text{Viable seeds (\%)} \times \text{pure seed units (\%)}}{100}$$

Figure: Pure Live Seed (%) (Pedrini, D'Agui, Arya, Turner, & Dixon, 2022)

For these reasons, rates of framework trees and understory shrubs have been slightly reduced as suppliers will need to adjust overall rates based on PLS. For example, when requesting 1kg of *Eucalyptus crebra* a supplier will need to provide purity and germination data and adjust the overall rate to ensure 1kg is supplied. For example, if purity is 98% and germination 70% = PLS 68%. To supply 1kg of *E. crebra* a supplier will require 1.47 kg of seed. It is also suggested that additional species are able to be included by an AQP if listed in the relevant Technical Description for the relevant RE (Queensland Herbarium, 2018).

Responses to items (d) and (e): The BWM PRC Plan is transitional and therefore it is not our preference to accept new milestone criteria in regard to the inclusion of fauna habitat features and/or shade trees for cattle grazing at this stage.

Pedrini, S., D'Agui, H., Arya, T., Turner, S., & Dixon, K. W. (2022). Seed quality and the true price of native seed for mine site restoration. Restoration Ecology Vol. 30, No. S1, e13638, 1-12.

Queensland Herbarium. (2018). Regional Ecosystem Technical Descriptions - Brigalow Belt. Brisbane: Department of Environment and Science.

RFI 38

Item	Relevant Document Section	Issue or Comment	Information Requested
38	Section 3.5.1.7.2 of the Planning Part - Water Management	Section 3.5.1.7.2 lacks sufficient detail regarding water management and does not meet the requirements of Section 3.6.1 of the PRCP Guideline. The PRC Plan must provide a comprehensive description of the contaminants that pose a risk to environmental values of the receiving environment. The Planning Part has not identified the specific Contaminant of Concern (CoC) associated with the activity. CoC identification should be based on site-specific information, including mining processes (e.g., dams and seepage data), industrial chemical inventories and waste characterisation. This information must be clearly presented in the PRC Plan to demonstrate that the proposed rehabilitation methodologies will ensure the land achieves a non-polluting condition. This is critical for refining the list of CoC that may require surface water and groundwater monitoring and limits as part of the PRCP Schedule. It is acknowledged that the WaTERS database contains some data for mine affected water releases at Blackwater. A more comprehensive dataset, along with supporting interpretations, is required as part of the Planning Part. While some information is included in the Waste Characterisation section and appendices, additional data and interpretations are necessary. The PRC Plan must clearly present comprehensive data from dams, seepage monitoring programs and void water quality conducted to	Provide an updated Planning Part that includes: (a) A description of potential CoCs associated with the activity (including the industrial chemicals listed in section 3.5.1.7.2). (b) Present comprehensive raw and interpreted data collected from dams, seepage, mine-affected water programs. Clearly outline the methodology used to identify, evaluate and refine the potential CoC, in accordance with the PRCP guideline requirements. Consider as a minimum, Electrical Conductivity, TDS, pH, sulphate, dissolved: aluminium, antimony, arsenic, barium, cobalt, copper, chromium, molybdenum, manganese, nickel, selenium, iron, zinc; fluoride, nitrate, total petroleum hydrocarbons, PFAS etc. (c) Present a statistically robust comparison of site-specific water quality data from dams, mine-affected water, seepage, void water quality against the relevant WQO, WQGs, baseline groundwater quality for the environmental values identified in Table 7 and Table 11 of the PRC Plan. Include a broad suite of contaminants in the appraisal. (d) Include a list of water quality indicators (based on CoC) and, where relevant, limits to be monitored in the residual voids. Provide an updated monitoring program that specifies frequency of water quality monitoring at sufficient intervals to be able to gather data to monitor/demonstrate the condition of the void pit water and to assist in future refinements of the PRC

		date for the site. Statistically robust data sets for the waste characterisation and site dams, seepage and void water should then be compared against the relevant water quality objective (WQOs) and water quality guidelines (WQGs) of all the identified environmental values, and where possible, to local surface water and groundwater baseline conditions.	Plan and void water quality modelling.
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The following information is provided to address the information request:

Response to item (a): The PRC Plan includes a comprehensive description of potential contaminants of concern (CoCs) associated with BWM operations and rehabilitation. In particular:

- Section 3.6.1.7 identifies potential contaminant sources associated with mining, processing, mine-affected water management, and historic industrial activities.
- Section 3.6.1.7.2 describes industrial chemicals used at the site, including hydrocarbons, PFAS-associated products, and explosives-related compounds.
- Sections 3.6.1.3, 3.6.1.6, and 3.6.1.7.3 describe the geochemical characteristics of mine wastes and the potential pathways and fate of contaminants in surface water and groundwater systems.

These sections describe the nature of potential CoCs, their sources, pathways, and receiving environments, and the management measures proposed to mitigate risks post-closure. This level of detail is considered appropriate for this PRC Plan stage and is consistent with the risk-based intent of the PRCP Guideline.

Response to items (b) and (c): We do not believe it is appropriate to provide data from operational dams, mine-affected water systems, seepage locations, or voids. The water quality data from these sources are strongly influenced by:

- historical and ongoing mine water transfers;
- operational water management practices;
- changing storage configurations; and
- climatic variability.

As a result, such datasets are not representative of long-term post-closure conditions and are not suitable for defining rehabilitation performance requirements or closure-phase CoCs at the PRCP stage.

RFI 39

Item	Relevant Document Section	Issue or Comment	Information Requested
39	Section 3.1.2 of the Planning Part - Baseline information Section 3.5.1.7 of the Planning Part - Water management Section 3.7.1.3.10 of the Planning Part - Groundwater monitoring	Section 3.1.2 of the Planning Part lacks sufficient detail and does not meet the requirements of Section 3.1 and 3.6.1 of the PRCP Guideline. Very limited data on the receiving environment's water quality has been provided or summarised in the Planning Part. The response to DETSI NPM Item #2, which refers to water quality data available via WaTERS or in separate REMP documents, does not meet the requirements of the PRCP Guideline. The guideline requires this data/information to be provided in the PRCP Plan and to be supported by adequate scientific analysis and rationale relevant to the rehabilitation and post-closure conditions. Regarding groundwater, in accordance with section 3.8 of the PRCP Guideline and section 126C(1)(j) of the EP Act, the Planning Part must include a monitoring and maintenance program that identifies and describes the monitoring systems required to demonstrate that milestones and milestone criteria have been achieved. However, section 3.7.1.3.10 of the PRC Plan proposes a single deep drainage Acceptance Criterion for rehabilitation based solely on Electrical Conductivity (EC). The plan indicates that the EC limit will be determined at a later stage. This approach does not adequately meet the requirements of the PRCP guideline, as it does not account for aquifer-specific and/or bore specific limits or provide assessments for all identified CoC. This is inadequate given the milestone and milestone criteria for the proposed NUMAs include the requirement to minimise environmental harm to receiving environments during post-closure and for the rehabilitated status of the site. The PRCP states that it is expected that the void lakes will contain	Provide an updated Planning Part that includes: (a) Background receiving environment water quality monitoring data (surface water, ground water). This must include all monitoring locations and indicators monitored. Use the attached departmental templates. (b) As a minimum, a statistically appropriate comparison of background data against the relevant water quality objective and water quality guidelines relevant to all the environmental values. (c) Proposed water quality limits for all identified CoC at surface water and groundwater monitoring locations. This is needed as part of the PRCP Schedule conditions (as per Section 4.2 of the PRCP Guideline). (d) Aquifer or bore specific information in terms of baseline water quality or proposed limits.

		elevated concentrations of salts and metals because of the quality of groundwater inflows and evapo-concentration effects over time. Additionally, water quality within the voids is projected to continue deteriorating beyond the modelled scenarios (>500 years) and stratification-based density driven seepage is listed as a potential impact. Without a fit-for-purpose monitoring program clearly documented, it is unclear how the successful achievement of milestone criteria can be demonstrated. Comprehensive water quality data is important and must be provided in both detailed and summarised formats. The rehabilitation and management methodology section of the Planning Part should include the detail of the proposed water quality monitoring program. For NUMAs the management milestones must be supported by milestone criteria that ensure the milestones are measurable. Management milestones are required for all improvement areas that have a NUMA to ensure that the NUMAs achieve best practice management of the area and minimise risks to the environment. Hence, quality characteristic must be based on CoC and CoC should be the same for surface water and groundwater. Proposed limits must be fit for purpose (based on closure rather than operational EA conditions), site-specific, and based on WQOs, guidelines and/or background data. Aquatic ecosystem protection, as a scheduled environmental value for the receiving environment, must also be considered where relevant. Background data may be utilised to establish site-specific water quality limits, specifically where natural mineralisation or processes are evident. For surface waters CoC, the 80th percentile of the data for upstream/reference site/s should be	
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		used for physico-chemical indicators and the 95th percentile for toxicants. For groundwater, the 95th percentile of the baseline (ideally pre-mining) data can be used to determine site-specific limits for all identified CoCs. Refer to the guidance presented in the Queensland Governments Guideline, 'Using monitoring data to assess groundwater quality and potential environmental impacts - Groundwater Quality Assessment. This guideline outlines the methodology required to accurately assess and process raw data for deriving proposed limits, under Queensland guidelines.	
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The following information is provided to address the information request:

Response to item (a): The surface water monitoring data spreadsheet provided by DETSI has been populated and is provided as a separate attachment within the folder titled "WHC IR Response – Supporting Attachments" (refer to *RFI 39 – BWM_SW_Data_DETSI_Template*). This spreadsheet includes relevant monitoring locations and indicators currently monitored for the receiving surface water environment.

As explained in the cover letter, the groundwater monitoring data spreadsheet provided by DETSI has not been populated at this time, as baseline groundwater data are currently being collated and will be submitted as part of a separate Environmental Authority (EA) amendment process.

Response to item (b): A statistical comparison of background surface water quality data against water quality objectives and guidelines has not been undertaken for the purposes of the PRCP.

BWM considers that the existing EA surface water framework, including background characterisation, can be appropriately transitioned into the PRCP Schedule. As specified in Table E1 of the BWM EA (Land Outcome Document), surface water monitoring is undertaken for pH, electrical conductivity, and turbidity, with milestone criteria defined as being "not significantly different to upstream values."

In addition, contaminants of concern identified in EA Table F3 will continue to be monitored for interpretive purposes consistent with Table 3-67 of the PRC Plan and the proposed PRCP Schedule (Attachment 7).

This approach is considered appropriate given the long operational history of the site, the influence of mine water management practices on water quality datasets, and the established EA framework governing surface water quality assessment.

Response to item (c) and (d): See RFI response #38.

RFI 40

Item	Relevant Document Section	Issue or Comment	Information Requested
40	Section 3.5.1.7 of the Planning Part - Water Management Section 3.6.1 of the PRCP Guideline	The Planning Part lacks sufficient detail and does not fulfil Section 3.6.1 of the PRCP Guideline. The PRCP must clearly present and justify the proposed monitoring locations for both surface water and groundwater. These locations should be determined based on a clear and defensible methodology that considers the sources and pathways of potential COCs specific to the rehabilitation areas and NUMAs on the site. For example, while groundwater monitoring locations are shown in Figure 65 and Table 58 of the Planning Part, the following critical issues have been identified: • No proposed monitoring points within ML70104 or ML70329 – despite the presence of a high risk TSF nearby. • No proposed monitoring points proposed in ML70167, ML1773 ML70139 or ML1771 – despite NUMAs being proposed nearby. Additionally, limited information has been provided regarding the aquifers that may be impacted by void pit water releases, TSF seepage, or other potential sources of contaminants. It remains unclear whether the groundwater monitoring program has been designed to effectively target the relevant aquifers relevant to rehabilitation and post closure and whether the selected locations are optimal for early detection of unintended emissions. No surface water monitoring is currently proposed in the draft PRCP Schedule. Present a surface water monitoring program. Ensure	(a) Provide an updated Planning Part that includes the detailed rationale and methodology used to propose, refine and map all water quality monitoring locations appropriate for rehabilitation and post-closure and appropriate to demonstrate the objectives of section 176A(3) of the EP Act. (b) Identify and assess aquifers that may be impacted by potential emissions, such as those associated with void pit water releases (or are sources to groundwater) or TSF seepage, and ensure the monitoring program is designed to capture data from these aquifers effectively. (c) Include monitoring locations appropriately place for all relevant mining leases, mining areas and NUMAs, and potential sources of contaminants to the receiving environment.

		the monitoring program is comprehensive and aligned with the closure objectives, particularly the requirement to minimise environmental harm to receiving environments and for PMLUs to achieve stable condition. Provide detailed descriptions of the methodology used to determine all monitoring locations be it for surface water or groundwater. The number and positioning of these monitoring locations need to be fit for purpose and aligned with best practice rehabilitation management programs	
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The following information is provided to address the information request:

Response to item (a): The rationale and methodology to set propose, refine, and map water quality monitoring locations appropriate for rehabilitation and post-closure is described in PRC Plan.

Response to item (b): Identification and assessment of aquifers potentially impacted by mining activities, including those associated with tailings storage facilities, reject dumps, and residual voids, form part of the current EA amendment process. Groundwater quality characterisation, aquifer-specific baseline conditions, and the refinement of groundwater monitoring programs associated with potential emissions (including void pit water and TSF seepage) will be addressed through that process. It is envisaged the outcomes of the EA amendment will inform future refinements to PRC Plan monitoring requirements where required.

Response to item (c): The water quality monitoring locations presented in the PRC Plan and PRCP Schedule have been developed to provide appropriate spatial coverage across:

- All relevant mining leases;
- Active and rehabilitated mining areas;
- NUMAs; and
- Potential contaminant sources, including final landforms, TSFs, reject dumps, and residual voids.

The proposed monitoring network is considered fit-for-purpose at the PRCP stage and proportionate to the scale of risk and the long-term rehabilitation objectives described in the PRC Plan.

PRCP Schedule

RFI 41

Item	Relevant Document Section	Issue or Comment	Information Requested
41	PRCP Schedule: General	The PRCP assessment process is an iterative process whereby ongoing awareness and understanding of the site's rehabilitation needs will lead to additions and variations to the draft PRCP schedule. Amendments proposed by the administering authority to the draft PRCP schedule is provided as an attachment to this information request notice to assist you in developing SMART criteria. Note, where the administering authority has not varied a criterion of the draft PRCP schedule, it is not intended to infer this criterion is accepted. Please review and amend the draft PRCP schedule in consideration of the additional information request items below. <i>Overall amendments proposed:</i> Completion criteria included for RM1 to RM3 does not achieve SMART principles. The administering authority proposed the inclusion of general criteria that apply to all PMLUs. Section 3.5.1.7 of the Planning Part (Water Management) indicates all mining-related dams are to be decommissioned and removed. Specific criteria for Cattle Grazing, Woodland Habitat, Watercourse and Tailings Storage Facilities and Reject dumps should be expanded to achieve SMART principles. Criteria for management milestones also don't achieve SMART principles. Additional criteria have been proposed by the administering authority, with more specific surface requirement and geotechnical criteria required to demonstrate that the landform is geotechnically stable. <i>Further specific requests are provided below.</i>	Review the proposed amendments to the draft schedule and advise of agreement or comment otherwise to the amendments. The draft schedule in response to this information request is able to be provided in the word document format rather than the excel spreadsheet. It is the administering authority's preferred approach that where proposed amendments are agreed, that track changes of these amendments is accepted. Any agreement to any comments on the schedule is to be provided as subsequent comments. Any additional amendments or concerns are to be provided in track changes and/or comments.

The PRCP schedule completion criteria has been revised and updated within the word document format provided by DETSI, with the use of track changes and comments provided where needed.

RFI 42

Item	Relevant Document Section	Issue or Comment	Information Requested
42	PRCP Schedule - Timeframes	In accordance with section 4.1 of the PRCP Guideline, milestones must have a completion date of the 10 December of the calendar year. Milestone completion dates of the draft PRCP schedule has been proposed as 1 July.	Provide a revised Schedule which proposes dates which areas are available, and milestones completed by that align with 10 December of the relevant year. Refer to the PRCP Guideline for examples.

The PRCP schedule has been updated to a milestone completion date of the 10 December as per DETSI request.

The period start dates are all marked as 01 July for internal business planning purposes. This was previously discussed with DETSI.

RFI 43

Item	Relevant Document Section	Issue or Comment	Information Requested
43	PRCP Schedule – Milestone complete dates for Ras	Several RAs have significant time lag between milestone competition dates between milestones. There is limited on no justifications for this lag, which can range up to 25, 30 or 90 years. RA2 has a 30-year gap where no additional areas are proposed to commence a milestone from 2075 to 2100. This is followed by another 25 years of no additional areas from 2100 to 2125. The RA tables propose a general timeframe for cattle grazing of 30 years between when the area is available to when RM7 is achieved or 25 years from the completion of the first milestone. RA6 has a 5-year gap where no additional areas are proposed to commence a milestone from 2040 to 2045. This is followed by another 90 years of no additional areas from 2060 to 2150. RA7 has a 95-year gap where no additional areas are proposed to commence a milestone from 2055 to 2150.	Justify why progressive rehabilitation is not occurring between these time periods or adjust the time periods to reflect progressive rehabilitation.

This matter was discussed with the administering authority during pre-engagement associated with the submission of PRC Plan Revision 2.

The milestone timing reflected in the PRCP Schedule is primarily driven by the physical availability of land for rehabilitation. In particular, RA2 includes above-ground tailings and rejects facilities that are not available for rehabilitation until later in the mine life, with milestone commencement and completion dates linked to the sequencing of adjacent mining and rehabilitation activities. The apparent time lags therefore reflect constraints on land availability rather than a lack of progressive rehabilitation.

Across the PRCP Schedule, where areas are available for rehabilitation, progressive rehabilitation is proposed and milestones are sequenced accordingly. The only notable time interval in the Revision 2 schedule that is not linked to the availability of specific rehabilitation areas is the period between RM7 and RM8. RM8 has been aligned across all RAs as it relates to achievement of site-wide groundwater performance criteria, which can only be assessed and confirmed once rehabilitation across the site has progressed to an appropriate stage.

On this basis, the milestone timeframes presented in the PRCP Schedule are considered appropriate and reflective of both progressive rehabilitation opportunities and site-wide performance requirements.

RFI 44

Item	Relevant Document Section	Issue or Comment	Information Requested
44	PRCP schedule – New figure	The relevant activities for IA1 include the names of voids as per the NUMAs proposed (Ramp 8, Mimosa/Besgrove, Deep Creek, Stewarton/Ballamoo, Kenmare, Togara/North Marshmead, South Marshmead, Comet Downs East, Kennedy West). A figure is sought for inclusion in the schedule which includes an overlay of pits as per the NUMAs proposed and which specific pits are included in each of these areas. For example, Figure 3 of the Planning Part includes 'Tannyfoil Pit', however, as this pit is part of the 'Stewarton/Ballamoo' void, this specification is needed to assist in identifying the relevant sections the Planning Part (and criteria) if required.	Provide a new figure to be included in the PRCP schedule which shows existing and proposed pits with current names and an overlay of pits with the proposed NUMA naming.

Figures 1 and 2 of the of PRCP Schedule (PRC Plan Appendix 4.1) have been updated to address the information request.

RFI 45

Item	Relevant Document Section	Issue or Comment	Information Requested
45	RM3	RM3.1 does not include an upper limit for slope gradient for the grazing PMLU. Landform criteria must be supported by appropriate technical studies and appropriate to the PMLU. Table 29 of the PRCP includes a commitment to place rock on steeper slopes, as per the recommendations of Appendix 4.8. This commitment is not reflected in the schedule. In general, the material placement recommendations in Appendix 4.8 have not been reflected in the schedule to a sufficient extent to ensure that the landforms will remain erosionally stable.	Provide a revised PRCP schedule with SMART criteria for landform geometry and material placement that can demonstrably be expected to achieve a stable condition and support the proposed PMLU.

The revised PRCP Schedule incorporates SMART criteria to address the information request and also includes an upper limit for slope gradient applicable to grazing PMLUs.

In terms of Table 29 in the Rev 1 PRC Plan, this reflects wording carried over from the BMA/Saraji PRC Plan approach which appears to inadvertently been transitioned to the BWM PRC Plan (before Whitehaven took ownership). The discrepancy was not identified until pointed out by the administering authority. This is inconsistent with the PRC Plan Appendix 4.8 report and with regards to BWM's approach to rehabilitation. It has subsequently been deleted from PRC Plan Rev 2.

RFI 46

Item	Relevant Document Section	Issue or Comment	Information Requested
46	RM4 Surface preparation	Completion criteria included for RM4 does not achieve SMART principles. The administering authority does not accept criteria proposed for surface preparation. In general, the Planning Part provides evidence the soil types are problematic for a variety of reasons. Appropriate criteria are required to demonstrate the management of growth media and completion criteria to be verified and evaluated by an AQP. The administering authority does not accept vague criteria such as 'Assessment of growth media characteristics and the development of an amelioration plan is completed by an AQP prior to placement on the landform'. Table 28 of the Planning Part, Growth media ameliorant options and surface treatments for the PMLUs, provides information which should be used utilised for the development of SMART criteria for Surface preparation.	Provide a revised Schedule which includes criteria for surface preparation consistent with the Planning Part and that achieves SMART principles.

The PRC Plan and PRCP Schedule (PRC Plan Appendix 4.1) have been updated to address the information request.

RFI 47

Item	Relevant Document Section	Issue or Comment	Information Requested
47	RMs Revegetation	The administering authority does not accept criteria proposed for Revegetation. An appendix which refers to BioCondition benchmarks is required. The criteria proposed must: (a) Provide a benchmark to measure areas requiring revegetation to demonstrate that the area is on a trajectory to achieving stable condition. (b) Provide a benchmark to measure the achievement of revegetation for each regional ecosystem. In addition, criteria should be included to ensure non-native seed has not been used for the revegetation (except for sterile cover crops). Example criteria you may consider for the achievement of surface requirements are: (a) A BioCondition assessment is completed by an AQP using the methodology outlined in the latest version of the Queensland Herbarium's 'BioCondition Assessment Manual'. (b) The BioCondition assessment completed under (X) complies with the > #/60 PRCP Benchmark for the PMLU, as per Appendix # - Biocondition Benchmarks. For the achievement of stable condition (later milestones): (a) An assessment of BioCondition benchmarks for 'PMLU' complies with the > #/60 PRCP Benchmark for the PMLU as per Appendix # - Biocondition Benchmarks	Provide a revised Schedule which includes BioCondition benchmarks for the relevant regional ecosystems which are the target PMLU outcome. Refer to the attached modified BioCondition benchmark framework and draft PRCP schedule to develop BioCondition benchmarks. Ensure criteria proposed for revegetation achieves SMART principles.

See the updated PRC Plan, PRCP Schedule and RFI responses 35-37 which address the information request.

RFI 48

Item	Relevant Document Section	Issue or Comment	Information Requested
48	RM6 Achievement of surface requirements	Criteria 6.1 and 7.1, for all PMLUs, proposes: (a) Restricted invasive plant species (Defined by the Biosecurity Act 2014 (Qld)) comprise <5% of total vegetation groundcover, with the exception of Parthenium hysterophorus which must not exceed 10% of vegetation groundcover and be assessed by an AQP as appropriately managed. It is unclear why of the reason for the variation in the groundcover percentage for Parthenium and whether the criterion will impact on the achievement of stable condition for all PMLUs.	Provide justification for the proposed criterion 6.1 regarding Parthenium groundcover and justify how a 10% of total groundcover maximum will align with the PMLU and ensure stable condition.

As previously discussed with the administering authority, Parthenium weed is quite common in Central Queensland cattle grazing pastures and broader regional ecosystems. In fact, it is listed as occurring in a number of regional ecosystems ranging from 3% to up to 50% cover (Queensland Herbarium, 2018).

Parthenium can also contaminate topsoil stockpiles and initial grow quite rapidly outcompeting sown pastures and only reducing over time through competition. Initial targeted herbicide control and longer-term goals to outcompete Parthenium with sown native and exotic (cattle grazing only) pastures is an effective strategy.

Parthenium is however an annual herb and can proliferate in the right conditions. Due to Parthenium being ubiquitous in Central Queensland and on mine site rehabilitation it is determined that a manageable level of maintaining $\leq 10\%$ is achievable for rehabilitated areas. To reduce this to $\leq 5\%$ would require a much higher intensive weed control program that would be well in excess of general management on surrounding lands and unlikely to provide more environmental benefits than targeting areas $\leq 10\%$.

Queensland Herbarium. (2018). Regional Ecosystem Technical Descriptions - Brigalow Belt. Brisbane: Department of Environment and Science.

RFI 49

Item	Relevant Document Section	Issue or Comment	Information Requested
49	RM6, RM7	Criteria 6.2, 6.3, 7.2, 7.3, and 7.4 do not adequately reflect the findings and recommendations of Appendix 4.8. There is significant variation in the recommended groundcover targets between the different soils and different slope gradients tested, and the criteria proposed do not sufficiently provide for erosional stability across all scenarios. The definition for groundcover used in the PRCP schedule does not reflect the definition and assumptions discussed in Section 3.5.4 of the erosion assessment (Appendix 4.8). It is noted that rocky material can increase erosional stability, however, the groundcover targets recommended in appendix 4.8 are for vegetative groundcover, with rockiness inherent to the materials already accounted for in model input parameters. Any additional rock added over and above that considered in the modelling can augment groundcover, but the definition used in the PRCP schedule does not provide sufficient guarantee that the assumptions and recommendations of the erosion assessment will be implemented.	Provide revised PRCP schedule that includes groundcover criteria that reflect the findings and recommendations of the erosion assessment.

The PRCP Schedule has been revised to clarify groundcover definitions and ensure alignment with the erosion assessment in Appendix 4.8:

- Groundcover: any material in contact with the soil surface, including live vegetation, standing dry vegetation, organic litter (leaves, hay, woody debris), or rocks.
- Vegetative groundcover: plants and plant litter (including tree leaf litter, twigs, and woody debris) capable of protecting the soil surface from erosion.

Appendix 4.8 focuses on vegetative groundcover when modelling erosion and assessing slope stability. Per Section 3.6 (Appendix 4.8) rocks were not included in these modelling assumptions, as the modelling explicitly accounts for the protective effect of rockiness within the input parameters. However, for environmental monitoring purposes, total groundcover measurements include rocks and other protective

material (moss, lichens, organic litter) in accordance with standard practice (e.g., DCCEEW, 2022), to capture all material protecting the soil surface.

The revised Schedule ensures that monitoring and targets reflect vegetative groundcover assumptions and recommendations of Appendix 4.8, while recognising that additional protective cover such as rocks and organic material contributes to observed field stability. This approach maintains consistency between technical modelling, rehabilitation targets, and monitoring methodology.

Reference:

Department of Climate Change, Energy, the Environment and Water (DCCEEW, 2022), *Estimating ground cover percentage* (<https://www.dcceew.gov.au/environment/land/landcare/my-project/monitoring-reporting/environmental-stewardship/ground-cover-percentage>).

The Australian Government's Ground Cover Monitoring Program (VegMachine, RAPP Map) uses fractional cover metrics that include bare soil, non-photosynthetic vegetation, and rock as part of land condition assessments. This is because there are many findings that rock and gravel act as protective groundcover elements that reduce erosion, improve infiltration, and support land resilience.

Australian Government Department of Agriculture, Fisheries and Forestry:
<https://www.agriculture.gov.au/abares/aclump/definitions>

Land cover refers to the physical surface of the earth, including various combinations of vegetation types, soils, exposed rocks and water bodies as well as anthropogenic elements, such as agriculture and built environments. Land cover classes can usually be discriminated by characteristic patterns using remote sensing.

Ground cover is a sub-component of land cover and can be used to infer land management practices. Ground cover is defined as the vegetation (living and dead), biological crusts and stone that is in contact with the soil surface. The non-woody ground cover such as crops, grass forbs and chenopod-type shrubs may change monthly rather than annually making this component a good indicator of land management performance. Ground cover is a sub-component of land cover and (from a remote sensing perspective) is the fractional cover of the non-woody understorey.

<https://www.publish.csiro.au/ebook/download/pdf/8129>

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Vegetation

the NVIS classification framework. These are the recommended cover types to be used when describing and classifying vegetation types in Australia.

Point intercept

Both crown cover and FPC may be collected objectively and simultaneously when using the point-intercept method (Figure 9). The point-intercept method is commonly established in a grid that is aligned to the plot defined boundaries (Laws *et al.* 2023a). To discriminate between cover types (crown cover and FPC), the concept of 'in-canopy sky' can be employed. The canopy perimeter, from a vertical perspective, is typically described by the extent of the outer layer of leaves of an individual tree or shrub (White *et al.* 2012). Within the canopy, openness or density of foliage varies depending on species, leaf shape and deciduousness. In-canopy sky is applied when using the point-intercept method when under a canopy and foliage or branches are not intercepted using a densitometer (Figure 9). This concept is taken from field techniques implemented for remote sensing field validation (Muir *et al.* 2011). It is worth noting that this methodology can be similarly applied to lower vegetation strata (e.g. the ground layer) to obtain accurate measures of vegetation cover for growth forms other than trees (Laws *et al.* 2023a).

Ground cover is routinely collected in many surveys where vegetation is being assessed. The point-intercept method is suitable for collecting ground cover (or sometimes referred to as substrate) by recording the nature of the substrate which is intercepted. Depending on the purpose of the survey the categories for substrate may include, but are not limited to, bare, cryptogam, gravel, litter, outcrop and rock (Laws *et al.* 2023a). This method can be applied simultaneously with recording lower vegetation strata to obtain accurate measures of vegetation cover for growth forms other than trees.

Ground cover can also be estimated by measuring the distance covered by the vertical projection of the leaves and woody branches onto a tape measure and expressing this as a percentage of the total length. This is referred to as a line-intercept method.

Point intercepts to record

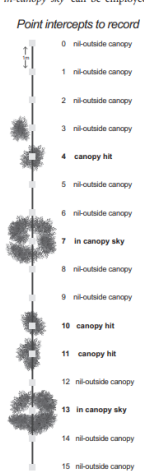


Figure 9 Example of point intercept 'upwards' determination of canopy. Source: Laws *et al.* 2023b: cover module.

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RFI 50

Item	Relevant Document Section	Issue or Comment	Information Requested
50	RM 8 Surface water and groundwater demonstrates non-polluting landform Attachment 4 Groundwater Quality Limits	The administering authority does not accept criteria proposed related to surface and groundwater. Refer to information request items 38 to 40 and amend the PRCP schedule in consideration of the issues identified. For the water quality criteria to be SMART the location, frequency, quality characteristics and limits are required. An appendix should be included in the PRCP schedule for each of the following: (a) Groundwater Monitoring locations (b) Groundwater quality limits (c) Surface Monitoring locations (d) Surface water quality limits Criteria should be included to ensure void water quality monitoring conducted at regular intervals at a minimum of 3 locations across the void water surfaces for the quality characteristics listed for proposed surface water quality limits.	In consideration of the issues identified in the Planning Part, provide an updated PRCP Schedule which includes further surface water and groundwater monitoring details and limits (including location, quality characteristics, limits and frequency of monitoring).

Please see RFI responses 38-40.

RFI 51

Item	Relevant Document Section	Issue or Comment	Information Requested
51	RA03 (RM1 – RM8)	The administering authority does not accept criteria proposed for Watercourses. Refer to information request items 19 to 21 and amend the PRCP schedule in consideration of the issues identified. Minimal Criteria have been provided for the rehabilitation of Watercourse PMLU. Three diversions (Sirius, Taurus and Rocklands) require realignment and/or rehabilitation. Criteria have not been included to ensure the realignment of the creek diversions are achieved and that the creek diversions achieve stable condition.	In consideration of the issues identified in the Planning Part, provide an updated PRCP Schedule which includes SMART criteria for Watercourses, including: (a) Expanded criteria which meets SMART principles and ensures achievement of stable condition. (b) Criteria for the completion of the realignment of water course diversions

See RFI response #20

RFI 52

Item	Relevant Document Section	Issue or Comment	Information Requested
52	MM2 Installation of cover system	As per request item 16 in relation to cover systems, completion criteria included for MM2 does not achieve SMART principles. The criteria proposed of 'An AQP has certified that the cover system is built/ installed as designed and has completed an 'As Constructed' engineering report for each cover system' is not achievable as there is no detailed design for the cover system at current nor a requirement in the schedule for one. At minimum, the PRCP is required to include SMART criteria that the covers must meet in terms of: (a) Target performance criteria (e.g. water flux density <5% average annual rainfall). (b) Validation by an AQP that the cover design will achieve the target criteria (for example: numerical modelling and column/field trials). (c) Validation by an AQP the growth medium is suitable for the proposed plant species mix (e.g. water holding capacity, fertility status, permeability, effective depth of rooting, etc). As noted in Appendix 4.12, a new concept design will be required for the particular waste storage facility if there are changes to: • Final landform geometry; • Post-mining land use, especially a change requiring different vegetation; • The approach to surface water management on the relevant final landforms (i.e. free draining or ponding); or • The understanding of end-of-mining and long-term groundwater levels in the vicinity of inpit TSFs.	Provide an updated PRCP Schedule that includes SMART cover system criteria which includes: (a) A requirement for a detailed design at an appropriate time before the commencement of the relevant milestones to ensure the achievement of stable condition for the structures. (b) The minimum criteria stated in the matters column (left). (c) Completion criteria that ensures a new concept design will be completed where there are changes to the following: - Final landform geometry; - Post-mining land use, especially a change requiring different vegetation; - The approach to surface water management on the relevant final landforms (i.e. free draining or ponding); or - The understanding of end-of-mining and long-term groundwater levels in the vicinity of inpit TSFs.

See RFI responses #16 and 28.

RFI 53

Item	Relevant Document Section	Issue or Comment	Information Requested
53	MM4 Achievement of sufficient improvement	Completion criteria included for MM4 does not achieve SMART principles. More specific criteria are required to ensure sufficient improvement is achieved. No criteria have been included to demonstrate the water level and quality in the voids do not and will not cause environmental harm to the surrounding environment.	Provide an updated PRCP Schedule that includes SMART for sufficient improvement

The PRCP Schedule completion criteria for MM4 has been revised and updated to address the information request.

RFI 54

Item	Relevant Document Section	Issue or Comment	Information Requested
54	NUMA criteria: Flooding	Criteria is required for landform or bunding, bank protection and erosion design where inundation up to and under PMF scenarios are predicted or where high-velocity flows (>2.5 m/s) are predicted to impinge of the landform based on proposed designs.	Provide criteria for the protection of the landform where inundation up to and under PMF scenarios are predicted or where high-velocity flows (>2.5 m/s) are predicted to impinge of the landform to ensure matters and expectations detailed in section 3.6.3 of the PRCP Guideline.

The PRCP Schedule completion criteria for MM1 has been revised to include criteria for the protection of landforms predicted to have high-velocities (>2.5 m/s) for 0.1% AEP events (see MM1.4 and MM1.5).

Spatial Data/Figures

RFI 55

Item	Relevant Document Section	Issue or Comment	Information Requested
55	Reference Map, Final Site Design and Spatial Data	The NPM response submitted to the administering authority on 16 May 2025 satisfied NPM Notice matters #5 – 7 (Reference Map, Final Site Design and Spatial Data). However further clarification is required regarding these matters. As previously noted, general disturbance is required to be mapped as Rehabilitation Areas (RAs) and exploration disturbance is not subject to RA mapping. It is unclear whether the figure below includes general disturbance (Figure 1) or whether the disturbance relates to exploration. Particularly the wider roads/tracks, general disturbance contiguous with the mining activities.  <i>Figure 1: Exploration and track extents not clearly defined by the PRCP</i>	Provide further confirmation Figure 1 includes general disturbance (Figure 1) or whether the disturbance relates to exploration. If applicable, update the Planning part and spatial data to include all areas of general disturbance.

Areas that are shown outside of the RAs as depicted in the figure above, relate to exploration or minor ancillary activities which are not required to be included in an RA. The rehabilitation of these areas is covered by the PRCP Schedule (General condition PRCP12).